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Tight IT Budgets Impair Planning As War Looms

Companies lack funds for disaster protection

BY DAN VERTON

Regardless of how imminent a U.S.-led war in Iraq might be, IT budget constraints are preventing many companies from taking appropriate security and disaster-preparedness measures to defend themselves against possible retaliatory terrorist strikes.

It's not necessarily that the threat is being ignored. It's just that the money many IT managers would like to have to combat it just isn't there.

John Ervin, a systems ad-

Companies, page 53

States struggle to pay for homeland security

BY PATRICK THIBODEAU
WASHINGTON

States are rapidly taking steps to standardize systems, eliminate IT redundancy and cut expenses in order to fund cash-strapped homeland security initiatives.

IT leaders must secure their companies' digital assets says Patricia Keefe.

State IT spending will rise slightly this year, much of it going to improve administrative and health systems, Federal Sources Inc. forecast last week. But new IT projects will be rare, because funding by Congress for homeland security is less than what IT managers say they need.

"It's extremely frustrating," said Rizwan Ahmed, whose duties include serving as CIO of the Louisiana Department of Natural Resources. Federal homeland security officials have asked his agency to help produce geographic information system maps of critical oil and gas pipelines. Although the mapping is getting done, "it's at the expense of some of our own projects," he said.

A telling sign of the bleak outlook was offered last week by FSI President James Kane at the company's annual state conference. Of approximately 500 potential IT spending projects that FSI is tracking — projects that haven't yet been put out to bid — two-thirds are on hold.

States, page 53

Top Execs Demand Data Now

But legacy systems hamper delivery of real-time information

BY THOMAS HOFFMAN

A growing number of CIOs say they're facing increased pressure to deliver real-time financial and operational data to their CEOs and chief financial officers, who want to be able to react more quickly to changing business conditions.

The problem is, many IT departments are struggling to meet such demands due to legacy system constraints and half-baked enterprise application integration efforts that haven't been aligned with corporate business processes.

Extracting financial and operational information for use by business managers "takes us weeks," said Steve Scott, vice president of IT at Vision Service Plan, a Sacramento, Calif.-based eye care benefits administrator that serves 36 million people in the U.S.

Scott was one of several technology managers who noted the challenges posed by real-time reporting demands at *Computerworld*'s Premier 100 IT Leaders Conference late last month. He said VSP is currently constrained by a 23-year-old financial system that it plans to replace within the next 12 months. Scott added that VSP is looking to install a

Real-Time Data, page 16

New BEA Tool Wins Guarded User Support

Developers wary of proprietary features

BY CAROL SLIWA
ORLANDO

BEA Systems Inc.'s new WebLogic Workshop 8.1 tool drew mixed reactions — sometimes from the same person — at the software maker's eWorld conference, held here last week.

The allure for many users is the point-and-click, drop-and-drag tool's potential to boost developer productivity. Several developers called Workshop compelling, and some referred to it as "Visual Basic for Java," referencing the Microsoft Corp. tool known for its ease of use.

But there's a trade-off for the new features. Many users took note of various proprietary application programming interfaces and class libraries in WebLogic Workshop 8.1 that they fear may re-

BEA Tool, page 15

Breaking Outsourcing Barriers

WATCH

CIOs at Allstate Insurance, Documentum and Coast Capital Savings all have outsourcing success stories to tell. But none of them got where they are by following conventional playbooks. Instead, they focused on the idiosyncrasies of their companies' business needs. So did the CIOs at General Motors and Bank One, who offer up some of the tough lessons they learned before adopting opposing all-or-nothing approaches to IT outsourcing.

READ THEIR STORIES, BEGINNING ON PAGE 39.

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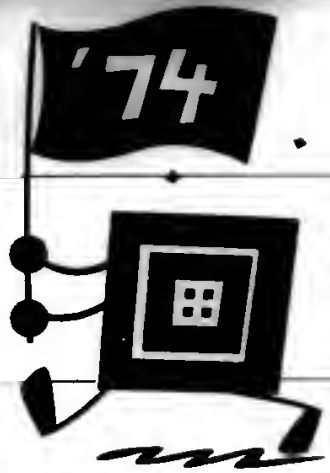
CONTENTS



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QuickStudy: Presence Technology

In the Technology section: Instant messaging introduced us to presence technology, which lets network users know when other users are connected to the network and available to receive and respond to messages. **Page 36**

Microprocessors on the March

Future Watch: It's getting harder and harder to keep Moore's Law going, but chip makers keep finding new tricks to tease more performance out of silicon. **Page 25**

NEWS

6 **Manufacturers expect** modest IT budget increases, with emphasis on integration, supply chain and customer-facing projects.

6 **Microsoft expands** its Office family with new additions.

7 **The push for antispam laws** heats up. States rush to pass bills, but Congress may preempt them.

7 **CRM still inspires caution.** Fearing repeats of past failures, companies roll out software slowly.

8 **Bug-fixing process improves.** The sendmail episode reveals some positive changes, but more remains to be done.

8 **SANS lauds Microsoft** for security efforts, presenting the vendor with three awards.

10 **Group seeks standards** for managing Web services.

14 **AT&T launches** an SSL-based VPN service.

14 **Vendors team up** to develop a device to manage remote access to WANs and authenticate wireless LAN users.

16 **Utility turns to EAI tools** to revamp supply chain integration initiative.

17 **Antitrust suit** widens rift in toner cartridge battle.

18 **Q&A: Dell exec pushes** for fast growth of company's $1 billion storage unit.

TECHNOLOGY

30 **Compression Relieves Congestion.** Wide-area network traffic-compression appliances promise to let network managers increase traffic loads without expensive upgrades to WAN links. Users tell us about their experiences with these products.

32 **Security Manager's Journal: When Bad Things Happen to Good Demos.** Rather than showing Vince Tuesday and his team how its security product would save them some time, a vendor presented a demo that made it clear that the software would create extra steps for the user.

MANAGEMENT

39 **Outsourcing Watch 2003: Breaking Outsourcing Boundaries.** Conventional wisdom about IT outsourcing may not make sense for your business. Three IT leaders tell how they got great results by breaking the rules.

42 **Outsourcing Watch 2003: All or Nothing.** GM and Bank One take opposite approaches to outsourcing. Their CIOs share the lessons learned from the different strategies.

44 **Q&A: Predictable Surprises.** Many IT disasters are preventable if you know how to spot them in advance. Learn what to look for in an interview with Michael D. Watkins, who co-wrote an article about the subject in the *Harvard Business Review*.

OPINIONS

10 **On the Mark: Mark Hall** learns that Web services management has no standards — and few tools to help in the meantime.

20 **Patricia Keefe** looks at the ways you should have already prepared your company for the possibility of war with Iraq.

20 **Pimm Fox** discovers a universal problem on par with death and taxes: lost data. But it's most painful to those in the financial industry, who face new rules to keep track of all their messaging systems.

21 **Thornton May** identifies the real IT credibility problem. It's not with IT managers; it's with users who don't know what they don't know.

37 **Nicholas Petreley** wonders what might happen in a software World Series.

46 **Bart Perkins** warns IT managers to do their homework before leaping into outsourcing contracts.

54 **Frankly Speaking: Frank Hayes** says you should stop what you're doing and go patch your sendmail servers. Now. What are you waiting for? Do it.

DEPARTMENTS/RESOURCES

At Deadline Briefs 6
News Briefs 10, 14
Letters 21
Company Index 52
How to Contact CW 52
Shark Tank 54

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Blueprints for Network Security

SECURITY: Every company needs a plan for protecting its environment. Expert Marcia J. Wilson offers advice on how to create one. **QuickLink 38909**

Breaking the 'Concrete Ceiling'

CAREERS: Marguerete Luter and Mary Ann Wagner offer tips on how women can get ahead in IT — with ideas that apply to everyone. **QuickLink 36771**

Measure Site Activity With ASP

DEVELOPMENT: Learn how to use Microsoft's free Active Server Pages technology to monitor your Web site's active sessions, log-ins and page hits. **QuickLink 38039**

All Systems Down

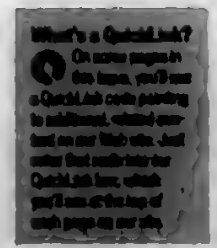
STORAGE: From *CIO* magazine comes an account of one of the worst health care IT crises ever — and what CareGroup CIO John Halamka learned from it. **QuickLink 38005**

Wireless Checklist

MOBILE & WIRELESS: Chuck Gautney, CTO at Defywire Inc., lays out a number of points to consider before embarking on an in-house wireless strategy. **QuickLink 35706**

Back to School With the Mac

MACINTOSH: As Hunter College's film and media department integrates new Apple hardware and software, Yuval Kossovsky sets up a Netinfo catalog for lab users. Part 3 of an ongoing series. **QuickLink 38015**



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AT DEADLINE

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BY JAIKUMAR VIJAYAN
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Additionally, a lot of the resources that manufacturing companies acquired to deal with the Y2k rollover are rapidly becoming obsolete and due for revamps this year, Jasinowski said.

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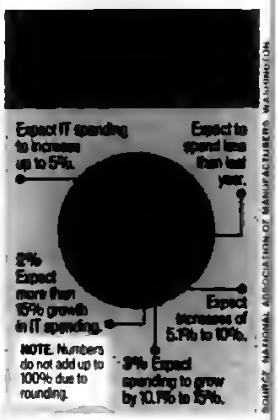
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SOURCE: NATIONAL ASSOCIATION OF MANUFACTURERS, WASHINGTON

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NEW PRODUCTS

Microsoft Office System

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States Rush to Pass Laws to Fight Spam

Congress urged to preempt states by adopting a national antispam rule

BY PATRICK THIBODEAU
WASHINGTON

BY THE END of this year, all 50 states may have antispam laws, and Congress could also act to adopt a national law. Lawmakers have never been under greater pressure to take action to fight spam. But there's little hope that legislation will bring IT managers much relief.

So far, 26 states have adopted spam laws that do things such as making forged address headers illegal. Other laws require that "ADV," short for advertisement, be included in the subject line of unsolicited commercial e-mail.

Emily Hackett, state policy director of the Internet Alliance in Washington, which represents some large Internet service providers, said states without an antispam law will soon have one. "There isn't any opposition to it," she said.

Marketing Troubled

But the state bills are troubling for the marketing industry. Some allow lawsuits against spammers that violate posted policies, which scares companies that use unsolicited e-mail to prospect for customers. There are also states eyeing a "do-not-spam" list similar to do-not-call telemarketing lists.

Congress is being pushed to act, in part to preempt state laws with a national one. The Direct Marketing Association (DMA) in New York, long an opponent of any spam regulation, is now backing a federal law to end the hodgepodge of state laws. No bills have been introduced yet, but that's expected to change.

"It's very difficult to keep track of varying state laws," said Louis Mastria, a DMA spokesman, who added that state laws are ineffective because a marketer doesn't necessarily know the physical address of a person being solicited. The state laws "set up legitimate e-mail marketers for a black eye," he said.

NEW TOOLS
Corporate options for fighting spam are growing. Read more at our Web site:
QuickLink 38877
www.computerworld.com

Another major proponent of action is Microsoft Corp., which last month ran ads in newspapers saying that "new, strong laws are needed" to combat spam. The U.S. Federal Trade Commission is planning a three-day forum on spam next month, an event that's seen as a pivotal gathering of all sides in the debate.

The success of any legislation will depend on enforcement, said Michael Redman, information systems director at Nicholson Manufacturing Co. in Seattle. Washington has an antispam law, but Redman said he's seen little impact from it. "There is a substantial amount of legislation out there already," he said. "If it's ignored and not enforced, it doesn't do us any good."

There is much skepticism that new laws will curb spam, because finding the most egregious spammers is difficult. "People are setting up dummy corporations and fly-by-night operations," said Stephen Winkelman, an Internet attorney at Fennemore Craig PC in Phoenix.

Accompanying the push for laws are efforts to create standards for regulating e-mail.

The ePrivacy Group in Philadelphia is developing open-standards, machine-readable technology that sets minimum principles for ensuring that an Internet service provider doesn't filter a digitally signed message from a business.

Filtering sometimes screens out too much information, said Vincent Schiavone, the company's president. "We don't see a way where you can fix e-mail with the current protocol," he said. ▶

CRM Projects Continue to Inspire Caution, Users Say

Fearing failure, companies roll out software slowly

BY MARC L. SONGINI
CHICAGO

Despite several years of technology evolution, rollouts of customer relationship management (CRM) software still pose challenges that are causing many companies to proceed with caution.

Corporate IT managers continue to face considerable pitfalls on CRM installations, according to Scott Nelson, a Gartner Inc. analyst who spoke at the consulting firm's CRM Summit Spring 2003 conference here last week. Nelson said Gartner last year surveyed hundreds of companies that have installed CRM applications, and about 55% of the respondents characterized their rollouts as failures.

Several conference attendees acknowledged that adoption of CRM tools by end users can be very slow. Many users are interested in CRM capabilities, but the technology "causes fear," said Shawn Kaplan, director of marketing and business development at New York-based financial data provider Reuters America Inc.

Reuters has rolled out Siebel Systems Inc.'s CRM applications internally and is now looking to provide CRM functionality to financial advisers who use Reuters data. But if CRM tools are provided as stand-alone applications, many users aren't going to bother to launch them, Kaplan said.

SOURCE: GARTNER GIC SURVEY OF 800 COMPANIES

With that in mind, he added, Reuters plans to use Web services integration technology developed by CRM vendor Onyx Software Corp. in Bellevue, Wash., to develop customizable application screens that present CRM capabilities alongside its financial data. That way, financial advisers won't even know they're using the technology, Kaplan said.

Fairchild Semiconductor International Inc. is using a bottom-up strategy on its CRM project by getting feedback from end users after each rollout of a tool, said Phaedra Bond, lead strategist for sales and marketing at the South Portland, Maine-based maker of electronics products.

Even so, the company is moving slowly.

Fairchild began rolling out PeopleSoft Inc.'s sales force automation software early last year. More than 350 end users are live on the software now, but Bond said it's expected to take up to three years to complete the project. "We're taking a sniper vs. a shotgun approach," she explained.

The company also is using a combination of techniques to encourage use of the software, Bond noted. On one hand, it's giving sales workers some flexibility in the way they use the CRM tools after a minimum amount of required customer data is entered into the system. But use of the software is being tracked and is required for compensation. If companies treat CRM projects solely "as a technical implementation, you're going to fail," Bond warned.

Starting Small

Because of management concerns about the challenges of implementing CRM software, American Trans Air Inc. (ATA) also started small, according to Robert Ellison, director of e-business and network services at the Indianapolis-based airline.

Since July, ATA has been rolling out a set of data warehousing and CRM analytics tools developed by NCR Corp.'s Teradata division for use in such areas as managing e-mail marketing campaigns for its frequent-flier program.

But the Teradata software is still being used by only about 10 end users, Ellison said. "We have been taking baby steps," he noted. "In fact, it was probably more like a crawl." ▶

AT DEADLINE

SCO Sues IBM For $1B Over Unix

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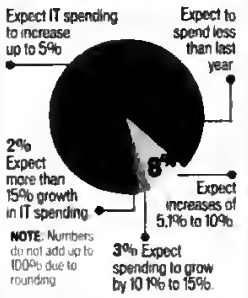
Manufacturers' IT Spending Plans for 2003


Expect IT spending to increase up to 5%
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Marketing Troubled

But the state bills are troubling for the marketing industry. Some allow lawsuits against spammers that violate posted policies, which scares companies that use unsolicited e-mail to prospect for customers. There are also states eyeing a "do-not-spam" list similar to do-not-call telemarketing lists.

Congress is being pushed to act, in part to preempt state laws with a national one. The Direct Marketing Association (DMA) in New York, long an opponent of any spam regulation, is now backing a federal law to end the hodgepodge of state laws. No bills have been introduced yet, but that's expected to change.

"It's very difficult to keep track of varying state laws," said Louis Mastria, a DMA spokesman, who added that state laws are ineffective because a marketer doesn't necessarily know the physical address of a person being solicited. The state laws "set up legitimate e-mail marketers for a black eye," he said.

NEW TOOLS
Corporate options for fighting spam are growing. Read more at our Web site
QuickLink 36877
www.computerworld.com

Another major proponent of action is Microsoft Corp., which last month ran ads in newspapers saying that "new, strong laws are needed" to combat spam. The U.S. Federal Trade Commission is planning a three-day forum on spam next month, an event that's seen as a pivotal gathering of all sides in the debate.

The success of any legislation will depend on enforcement, said Michael Redman, information systems director at Nicholson Manufacturing Co. in Seattle. Washington has an antispam law, but Redman said he's seen little impact from it. "There is a substantial amount of legislation out there already," he said. "If it's ignored and not enforced, it doesn't do us any good."

There is much skepticism that new laws will curb spam, because finding the most egregious spammers is difficult. "People are setting up dummy corporations and fly-by-night operations," said Stephen Winkelman, an Internet attorney at Fennemore Craig PC in Phoenix.

Accompanying the push for laws are efforts to create standards for regulating e-mail.

The ePrivacy Group in Philadelphia is developing open-standards, machine-readable technology that sets minimum principles for ensuring that an Internet service provider doesn't filter a digitally signed message from a business.

Filtering sometimes screens out too much information, said Vincent Schiavone, the company's president. "We don't see a way where you can fix e-mail with the current protocol," he said ▶

CRM Projects Continue to Inspire Caution, Users Say

Fearing failure, companies roll out software slowly

BY MARC L. SONGINI
CHICAGO

Despite several years of technology evolution, rollouts of customer relationship management (CRM) software still pose challenges that are causing many companies to proceed with caution.

Corporate IT managers continue to face considerable pitfalls on CRM installations, according to Scott Nelson, a Gartner Inc. analyst who spoke at the consulting firm's CRM Summit Spring 2003 conference here last week. Nelson said Gartner last year surveyed hundreds of companies that have installed CRM applications, and about 55% of the respondents characterized their rollouts as failures.

Several conference attendees acknowledged that adoption of CRM tools by end users can be very slow. Many users are interested in CRM capabilities, but the technology "causes fear," said Shawn Kaplan, director of marketing and business development at New York-based financial data provider Reuters America Inc.

Reuters has rolled out Siebel Systems Inc.'s CRM applications internally and is now looking to provide CRM functionality to financial advisers who use Reuters data. But if CRM tools are provided as stand-alone applications, many users aren't going to bother to launch them, Kaplan said.

UNUSED SOFTWARE
42%
of the CRM end-user licenses bought last year aren't being used

With that in mind, he added, Reuters plans to use Web services integration technology developed by CRM vendor Onyx Software Corp. in Bellevue, Wash., to develop customizable application screens that present CRM capabilities alongside its financial data. That way, financial advisers won't even know they're using the technology, Kaplan said.

Fairchild Semiconductor International Inc. is using a bottom-up strategy on its CRM project by getting feedback from end users after each rollout of a tool, said Phaedra Bond, lead strategist for sales and marketing at the South Portland, Maine-based maker of electronics products.

Even so, the company is moving slowly.

Fairchild began rolling out PeopleSoft Inc.'s sales force automation software early last year. More than 350 end users are live on the software now, but Bond said it's expected to take up to three years to complete the project. "We're taking a sniper vs. a shotgun approach," she explained.

The company also is using a combination of techniques to encourage use of the software, Bond noted. On one hand, it's giving sales workers some flexibility in the way they use the CRM tools after a minimum amount of required customer data is entered into the system. But use of the software is being tracked and is required for compensation. If companies treat CRM projects solely "as a technical implementation, you're going to fail," Bond warned.

Starting Small

Because of management concerns about the challenges of implementing CRM software, American Trans Air Inc. (ATA) also started small, according to Robert Ellison, director of e-business and network services at the Indianapolis-based airline.

Since July, ATA has been rolling out a set of data warehousing and CRM analytics tools developed by NCR Corp.'s Teradata division for use in such areas as managing e-mail marketing campaigns for its frequent-flier program.

But the Teradata software is still being used by only about 10 end users, Ellison said. "We have been taking baby steps," he noted. "In fact, it was probably more like a crawl." ▶

Bug Disclosure, Fix Process Improving

Sendmail episode shows progress made

BY JAIKUMAR VIJAYAN

SEVERAL USERS welcomed the growing willingness of vendors and security researchers to work together to identify and fix software vulnerabilities in the wake of last week's disclosure of a major hole in a widely used e-mail protocol.

But they also expressed concern over the practice by some in the security community to release vulnerability information to certain users before making it available to the public.

Atlanta-based security vendor Internet Security Systems Inc. (ISS) and Emeryville, Calif.-based Sendmail Inc. last week disclosed the existence of a major buffer-overflow vulnerability in the sendmail mail-transfer agent, which handles more than 50% of all Internet e-mail traffic.

ISS, which first discovered the hole in early December, said it began in mid-January to work closely with the National Infrastructure Protection Center — now part of the U.S. Department of Homeland Security — to warn government and military agencies of the flaw.

The sendmail incident exemplified a welcome change in attitude relating to vulnerability discovery, disclosure and response, users said.

"The security community is becoming more responsible and is making better decisions with regard to when they should disclose a vulnerability," said Mike Tindor, vice president of network operations at First USA Inc., an Internet service provider in St. Clairsville, Ohio.

There is a growing realization that "making a vulnerability public without a fix is not in the industry's best interest," said Anthony DeVoto, a Windows NT administrator at Volvo Finance North America Inc. in Montvale, N.J.

"It's kind of like a car company coming out on the 6 o'clock news and saying your car is going to blow up and they don't know how to fix it," said David Krauthamer, director of information systems at Advanced Fibre Communications Inc., a Petaluma, Calif.-based manufacturer of telecommunications equipment. "I think the software and security industry has matured to the point where it is unacceptable to put customers in a position of such vulnerability," he added.

> **"It's kind of like a car company . . . saying your car is going to blow up and you don't know how to fix it."**
>
> **DAVID KRAUTHAMER,** DIRECTOR OF INFORMATION SYSTEMS, ADVANCED FIBRE COMMUNICATIONS

Meanwhile, software vendors, which continue to come under heavy criticism for developing buggy products, are getting "a little bit better" at disclosing and responding to bug reports, said Edward York, chief technology officer at 724 Inc., a Lampoc, Calif.-based hosting provider.

Groups such as the Organization for Internet Safety are trying to propose standard guidelines for reporting and responding to vulnerability information. And several security companies have voluntarily adopted policies governing the release of vulnerability information.

"The processes surrounding vulnerability disclosure have changed significantly during the past few years for the community as a whole," said Thor Larholm, a security researcher at PivX Solutions LLC, a network security consultancy in Newport Beach, Calif. Instead of making ad hoc disclosures, PivX has a 30-day grace period for vendors to fix a problem before the public is made aware of it.

Questionable Practices

Despite such progress, other issues remain, users said.

For instance, ISS's decision to prenotify several government and military agencies of the problem is understandable given today's heightened security concerns, users said. But it highlights a practice that can encourage "information segregation and concealment," said Paul Schmehl, adjunct information security officer at The University of Texas at Dallas.

Many security organizations — including the CERT Coordination Center at Carnegie Mellon University in Pittsburgh and ISS — routinely sell advance vulnerability information to paying subscribers. Strict nondisclosure agreements govern such prenotifications, said Dan Ingevaldson, a security researcher at ISS.

But "safe practice is that only the vendor should be notified [of a flaw] so they can test it and create a patch. Only then should the information be made available to anyone else," said York.

MORE ONLINE

A hacker site posted sendmail exploit code less than 24 hours after public disclosure of the vulnerability

QuickLink a2950

ISS also reported a Snort vulnerability last week

QuickLink a2960
www.computerworld.com

SANS Institute Lauds Microsoft Security Efforts

Patch automation, security tests cited

BY JAIKUMAR VIJAYAN

Microsoft Corp., long at the receiving end of widespread user criticism for buggy products, last week received a rare pat on the back for its security efforts from the SANS Institute.

SANS, a research organization for systems administrators and security managers in Bethesda, Md., gave Microsoft awards for demonstrating leadership in three security categories at the Fifth National Information Assurance Leadership Conference in San Diego.

The company won awards for leadership in providing automated security updates; providing security training for software developers; and providing testing software for security vulnerabilities.

Microsoft's award in the automated updates category — which it shared with Linux supplier Red Hat Inc. — was in recognition of the automated patching service for Windows XP and Windows 2000 Service Pack 3 and above. Microsoft's security training program for software developers earned the company its second award, while its extensive automation of its software testing process snagged the third one.

The awards were based on criteria and feedback from security administrators at 15 large institutions that SANS works with on a daily basis, said Alan Paller, director of research at SANS. Many of those who participated in the decision process were administrators working in organizations with more than 10,000 systems, Paller said.

"The idea of illuminating vendors who are doing things that are industry-leading grew out of a series of meetings with users who were complaining about vendors making security hard [to implement]," Paller said.

> **"'Microsoft' and 'security' in the same sentence is usually a joke."**
>
> **MATT KESNER,** CTO FENWICK & WEST

Word of Microsoft's awards was greeted with mixed feelings.

"'Microsoft' and 'security' in the same sentence is usually a joke," said Matt Kesner, chief technology officer at Fenwick & West LLP, a Mountain View, Calif.-based law firm. "I give them a lot of credit for making security a higher priority, but I would like to see a lot better fundamental design from them before I start handing out any awards," Kesner said.

"I think Microsoft has made great strides in security," said Paul Schmehl, adjunct information security officer at The University of Texas at Dallas. "They are ahead of some of the Unixes and at least on par with some others, [but] they still have a long way to go," he said.

The awards demonstrate the importance of looking at factors other than just total bug count when evaluating a vendor's security practices, said Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa.

"Counting the number of identified vulnerabilities alone is completely without merit," Lindstrom said. It's also important to gather information on factors such as a vendor's training practices, development processes and bug tracking methods, he said.

"Sometimes," Lindstrom said, "Microsoft gets a bum rap just because they are who they are."

If you're busy monitoring your servers, who's watching your business?

The new HP ProLiant DL740 8-way with hot-plug RAID memory.

- Ultradense 4u modular chassis with up to eight Intel® Xeon™ MP 1.5 GHz or 2.0 GHz processors
- Up to 64GB addressable memory
- Groundbreaking F8 chipset
- 6-64 bit/100 MHz PCI-X slots
- Integrated Lights-Out Standard (iLO) for Remote Server Mgmt.

The new HP ProLiant DL760 G2 8-way with hot-plug RAID memory.

- Up to eight Intel® Xeon™ MP 1.5 GHz or 2.0 GHz processors
- Up to 64GB addressable memory
- Groundbreaking F8 chipset
- 10-64 bit/100 MHz PCI-X, 1-64 bit 33 MHz slots
- Remote Insight Lights-Out Edition II (optional) for Remote Server Mgmt.

What challenges do you face today? Decreasing budgets? The lurking possibility of downtime? It's hard enough to focus on moving your business forward when you're constantly looking over your shoulder to see if everything is up and running.

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At the end of the day, you'll have more control over your infrastructure, help avoid unplanned downtime and reduce overall maintenance costs. Not to mention freeing yourself up for more important things.

To learn how HP ProLiant servers can be a part of maximizing your company's uptime, download CMP's executive brief on high availability at www.hp.com/go/proliant85 or call 1-800-282-6672, option 5, and mention code YPH.

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BRIEFS

Airlines Agree to Sell Worldspan

Worldspan LP, which runs a computerized reservations system, said its airline owners have agreed to sell it to two investment firms. American Airlines Inc., Delta Air Lines Inc. and Northwest Airlines Inc. will sell Worldspan to a new company set up by Citigroup Venture Capital Equity Partners LP in New York and Teachers' Merchant Bank in Toronto.

Microsoft Signs App Lease Services Deal

Microsoft Corp.'s IT financing unit announced a deal to offload lease contract management services for users of its business applications to another company. The leasing functions will now be handled by De Lage Landen Financial Services Inc. in Wayne, Pa. The Microsoft Capital Corp. unit said it will continue to offer financing to corporate users and to small or midsize companies.

Peregrine Lowers Revenue by $509M

Peregrine Systems Inc. restated its financial results for the three fiscal years from April 1999 to March 2002, chopping the revenue it had reported by $509 million. That reduced the original three-year total of $1.34 billion by 38%. Peregrine, a San Diego-based vendor of asset management software, said about $259 million was "reversed for nonsubstantiated transactions."

Short Takes

INTEL CORP. this week plans to launch a new foray into the notebook PC market by announcing six mobile processors under the name Pentium M. . . . SUN MICROSYSTEMS INC. said an open-source group that's developing its JXTA peer-to-peer computing software has released an upgrade.

MARK HALL ▪ ON THE MARK

Vendors Scramble to Fill Web Services Hole . . .

. . . in application management, which could pose a serious problem to companies rolling out Web services-based software. Oded Noy, CTO at Path Communications Inc. in Marina Del Rey, Calif., worries "that all the coding errors we used to catch at compile time, we're now going to catch at runtime in Web services." Hewlett-Packard's OpenView group has addressed the issue by launching its Web Services Management Organization. According to its CTO, Al Smith, **the move is both defensive and offensive.** In the former category, HP sees companies such as Path potentially stealing away OpenView business. And Smith points to recent venture capital investments in Web services management start-ups such as AmberPoint Inc. in Oakland, Calif., and Flamenco Networks Inc. in Alpharetta, Ga., as proof that this will be a hot, competitive market. (Of course, venture capitalists also **showed their genius by pouring millions into Pets.com** and Webvan.) In the offensive category, he claims, "we can extend the definition of what is management." Smith thinks the lack of Web services management standards and tools has dampened its adoption rate among users. The lack of management standards for Web services is finally being addressed (see story below), but the standards committee will probably take a year to complete its first draft.

Until then, developers of Web services **will have to do the work themselves** to manage applications for things such as authentication, performance and service-level agreements. If they think of them at all. "Management is not something developers think of. It's an afterthought when people write apps," Smith laments. ▪ That's why you don't need a developer to deploy the latest version of the Path Application Manager, or P.A.M. 3.5, which ships today. According to Path's Noy, sysadmins can do it after an application is in production. He claims P.A.M. 3.5's software behavior-recognition features should catch many management problems in Web services and other applications. Among the new features in P.A.M. 3.5 are controls that can identify **time-of-day, time-of-month and time-of-year** fluctuations in any program. ▪ Once those Web services get written and widely deployed — managed or otherwise — few people have the slighest clue about how they will affect network performance. The engineers at Redline Networks Inc. in Campbell, Calif., have readied for delivery this week the E/X 3250 Enterprise Accelerator that adds **compression, load balancing and security for Web servers and inside the firewall.** CEO Roy Johnson argues that some Web services-based applications will require very large data structures or interaction among lots of different Web services, putting extra loads on Web servers and killing their performance — hence the 3250. Redline Vice President of Engineering Bill Crane boasts that the 3250's protocol scrubbing and Secure Sockets Layer certificates for road warriors **improves security by protecting Web servers from buffer overflows and unauthorized users.** ▪ OpenVMS users cheered when HP said it had an **11-year life plan for the venerable operating system.** And on March 18, they can let loose a small whoop for the general availability of Version 6.2 of SightLine OpenVMS Power Agent from Fortel Inc. in Fremont, Calif. The performance monitoring and reporting tool will be able to handle OpenVMS clusters and distinguish among operational differences during different working hours. ▪ Whatever your views on the looming war with Iraq, Ivan Eland, director of the newly created Center for Peace and Liberty at The Independent Institute think tank in Oakland, suggests that **IT may be at the center of an Iraqi war strategy** because Saddam Hussein learned from Vietnam, Lebanon and Somalia that "the Achilles' heel of the American military juggernaut is U.S. public opinion." Cyberattacks would be a likely way to undermine wavering U.S. support for the war. He adds, "It is difficult to say how successful the Iraqis would be, but they have had more than a year of U.S. blustering to put a plan into action." So, take a little extra time this week to secure your systems. ◗

Storage management gets a lift today from in Boston with the release of its active storage management product, Astrum 1.5. The new version includes support for Microsoft Exchange 2000, Sybase Inc. databases and localization for German and French versions of Unix and Windows. in Alameda, Calif., will announce this week that it has landed a deal to manage the data monitoring of the world's largest offshore wind farm along the coast of Denmark.

Web Services Management Standard Sought

BY MATT HAMBLEN

More than a dozen IT vendors last week said they plan to work together to develop a standard way to manage Web services technologies used in distributed applications.

The list of participating companies includes systems vendors, such as IBM, Hewlett-Packard Co. and Sun Microsystems Inc., plus developers of management tools, such as BMC Software Inc., Computer Associates International Inc. and Novell Inc., according to a statement by the Organization for the Advancement of Structured Information Standards (OASIS) consortium in Billerica, Mass.

Microsoft Corp. wasn't on the list. A Microsoft official said Web services management is an important topic but added that the company has decided not to join the OASIS effort at this point.

"Simply put, management is the next major barrier to mainstream Web services adoption," said HP CEO Carly Fiorina during a speech at BEA Systems Inc.'s eWorld conference in Orlando. Fiorina also said HP has added Web services management tools to its OpenView software and created deployment and management consulting programs for Java-based Web services applications.

OASIS said the new Web Services Distributed Management (WSDM) technical committee it's setting up will work with other standards bodies, including the World Wide Web Consortium and Distributed Management Task Force Inc. in Portland, Ore.

Jason Bloomberg, an analyst at ZapThink LLC in Waltham, Mass., said the WSDM committee might be able to produce a standard within a year. Microsoft's absence isn't that significant for now, since it could adopt the standard once it's published, he said. ◗

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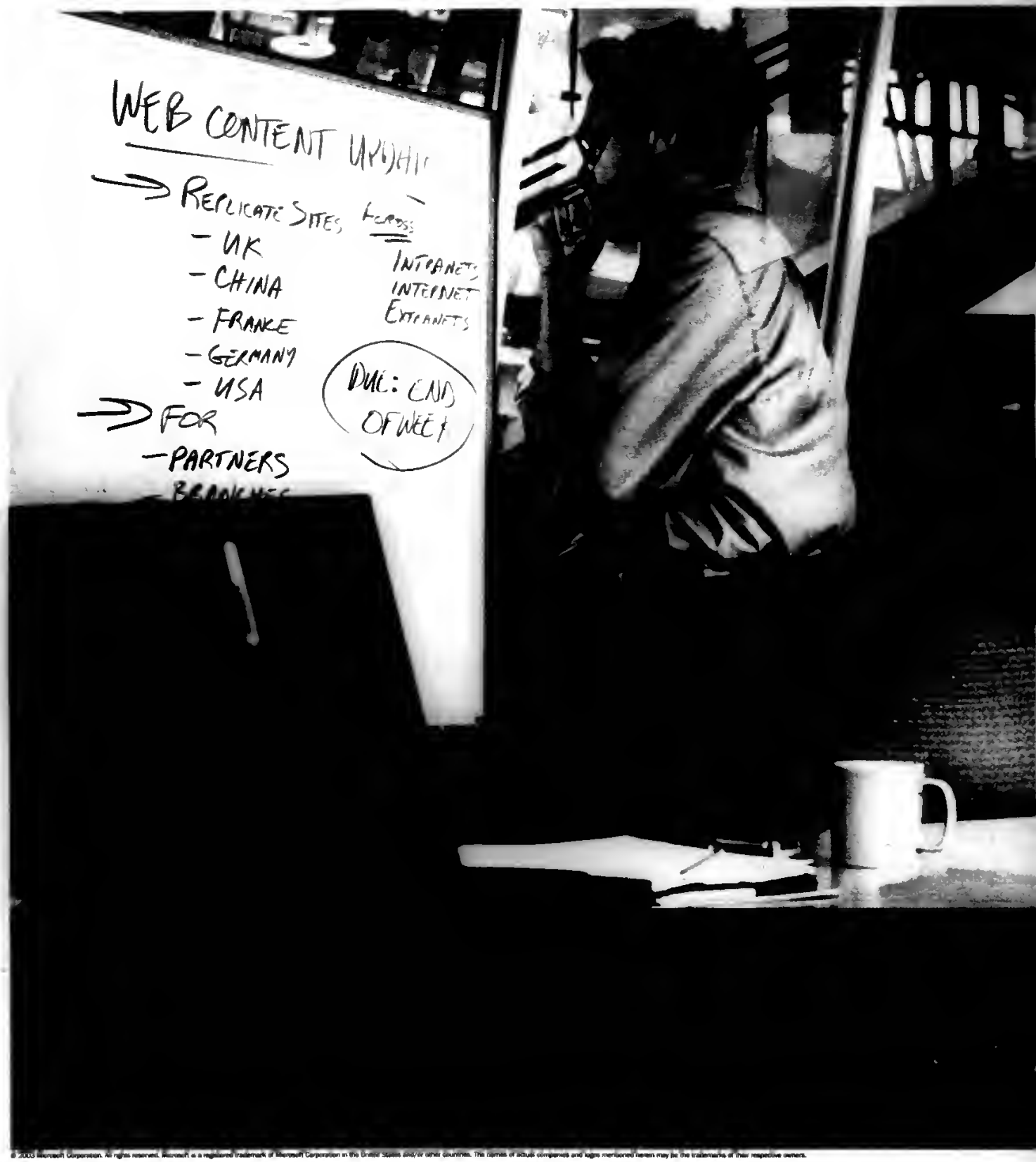

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BRIEFS

EMC, Hitachi End Patent Dispute

EMC Corp. and Hitachi Ltd. agreed to settle dueling patent-infringement claims related to storage technology. Hitachi will make unspecified "balancing payments" to EMC as part of a patent cross-licensing deal, the companies said. They also agreed on a framework for exchanging application programming interfaces (API), and EMC announced a similar API deal with Veritas Software Corp. in Mountain View, Calif.

3Com Sells Off Carrier Products

3Com Corp. announced a deal to sell the key assets of its CommWorks business unit to UTStarcom Inc. in Alameda, Calif., for $100 million in cash. CommWorks makes IP-based networking equipment for telecommunications carriers. Santa Clara, Calif.-based 3Com said it will retain a license to the technology.

Palm Says Sales Will Miss Target

Blaming weak sales of its handheld devices to corporate users, Palm Inc. warned that it will report lower-than-expected revenue for its third quarter, which ended Feb. 28. Milpitas, Calif.-based Palm said revenue will total about $210 million, falling short of its $230 million to $250 million prediction. Analysts recently said the corporate market for handhelds has stagnated [QuickLink 36045].

Short Takes

IBM recalled about 56,000 PC monitors sold in 1997 and 1998 because of a faulty component that could overheat. . . . San Francisco-based MACROMEDIA INC. warned of a security flaw in Version 6 of its Flash Player software and urged users to install an updated release.

AT&T Launches VPN Service Based on SSL

Aventail's remote-access devices to be used to expand networking choices

BY MATT HAMBLEN

AT&T CORP. today plans to join forces with Aventail Corp. by announcing a deal to resell that company's new Secure Sockets Layer (SSL) remote-access devices as part of a managed virtual private network (VPN) service.

NETWORK SERVICES

AT&T said it will charge customers a monthly fee for the SSL VPN service and put the tab on one bill along with its other network services and connection costs. Seattle-based Aventail will install and service its rack-mountable EX-1500 appliance, which is designed to eliminate the need for end users to install remote-access client software on laptop PCs and other mobile computing devices.

The reseller agreement made sense partly because the two companies share many global customer accounts, said John Sullivan, extranet product manager at AT&T. Sullivan wouldn't divulge the pricing for the new VPN service, which is due to be rolled out as early as next month. Aventail set a starting price of $20,000 on the EX-1500 when the SSL-based appliance was announced in January [QuickLink 35527].

Aventail currently offers its own SSL VPN managed service and will continue to do so. But Sullivan said the sales forces of both companies will be able to sell AT&T's version of the managed service, with AT&T acting as the first point of contact for users.

Weighing Options

New York-based Deloitte Consulting has used Aventail's SSL VPN service for the past two years to manage remote access to corporate data and e-mail systems for 15,000 workers worldwide, said CIO Larry Quinlan. Currently, the consulting firm relies mainly on WorldCom Inc. to provide remote-access network services.

The WorldCom deal, valued in the millions of dollars annually, will be re-evaluated within the next 12 months, Quinlan said. Deloitte officials "would like more integration between remote-access lines and the VPN," he said. But if they considered the joint AT&T/Aventail offering, "we would insist on some cost savings" compared with buying separate services, Quinlan added.

AT&T is already the market leader in providing VPN services that support the IPsec security protocol, according to Framingham, Mass.-based IDC. Unlike SSL, IPsec requires the loading of client software on end-user devices.

Sullivan said AT&T will continue to support IPsec in addition to offering the new SSL VPN service. There's "very little overlap" between the users of the two technologies, he said.

Although SSL VPNs are increasing in popularity among corporate users, the demand for IPsec VPN services should continue to show some growth in installations because that protocol offers stronger security algorithms than SSL does, said John Girard, an analyst at Gartner Inc. in Stamford, Conn.

Vendors Team Up to Develop Remote-Authentication Device

Security appliance controls end-user access to networks

BY MATT HAMBLEN

Funk Software Inc. and Network Engines Inc. today will release a jointly developed security appliance for authenticating remote users connecting to corporate WANs as well as users on wireless LANs.

Canton, Mass.-based Network Engines built and will distribute the hardware, which runs remote end-user authentication and authorization software developed by Cambridge, Mass.-based Funk.

The combined product is a rack-mountable device that runs under Windows 2000 Professional, according to the two companies, which announced plans to collaborate on the appliance in January.

Size and ease of deployment were the reasons Care New England Health System in Providence, R.I., deployed an early version of the appliance last month, said Larry Pesce, a LAN/WAN specialist at the health care company.

Thus far, about two dozen end users have used the appliance for network authentication over dial-up laptop connections or to gain access to Care New England's 802.11 WLANs, Pesce said. Within weeks, the use of the device will be scaled up to handle about 1,000 medical personnel at three major facilities and other locations throughout Rhode Island, he added.

The appliance not only provides authentication services but also manages the configuration process, Pesce said. It would have taken several days or weeks to buy server hardware and configure it, taking up valuable time for Care New England's IT staff, he noted. But the new appliance "just worked out of the box, no headaches at all," he said.

The company bought and installed two of the appliances for about $30,000, which was 10% less than regular server hardware would have cost, according to Pesce. The appliance also takes up very little space in Care New England's cramped data center, he said.

Funk competes with major vendors such as Cisco Systems Inc. and Microsoft Corp., which also sell authentication tools that support the Internet Engineering Task Force's Remote Authentication Dial-In User Service (RADIUS) protocol. "But Funk often gets in the door for ease of use," said John Girard, an analyst at Gartner Inc. in Stamford, Conn.

The market for RADIUS-based remote authentication products and services is expanding, Girard said, adding that appliances combining hardware with software are fashionable now, partly because they provide all-in-one capabilities to users.

Continued from page 1

BEA Tool

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The Need for Ease

But as a result of Java's growing maturity and acceptance, IT shops with less skilled developers are taking up the technology, and that makes the need for better tools more critical. Also, the knock that Java is too complicated has become a pressing concern for vendors that now must compete against Microsoft's year-old .Net technology.

"We, like our primary competitors, all have to introduce innovations to make the products easier to use," said Scott Dietzen, chief technology officer at San Jose-based BEA. "And some of those are in our classes."

Dietzen said BEA's key APIs — such as Web Services Metadata and a Java Rule Engine — are already moving through the Java's standards body. Others, such as Java Page Flow and Process Definitioo for Java, are pending. And some minor proprietary pieces may never make it to the JCP, he added.

"We take the most critical interfaces and get them into the standards process because that's where the investment protection is most needed," said Dietzen. "Putting 100% of our APIs into the Java standards process is too expensive. It would cost a huge amount of money, and the net return to customers is very small."

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He didn't fault BEA's approach, and he praised the company's efforts to standardize its technology. "Any vendor who wants to innovate is going to have to become more proprietary, at least for a period of time until the standards catch up," Driver said.

But as several users pointed out, there's no guarantee that all of the technology will become a standard. And even if it does, there's no guarantee that it will be adopted by other vendors, such as IBM.

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Moffett said he likes the concept of the Workshop tool, which works across all BEA products. But he said he has concerns about being restricted to running code written with Workshop on only BEA products, especially since UPS has standardized on IBM's WebSphere portal software.

"Everyone's going to have to take a hard look at how [WebLogic Workshop] aligns with your architectural goals. It's a very conscious decision you need to understand that you're taking," said a Web development manager for a medical distributor who asked not to be identified. He added that he still finds the tool "compelling."

James Kline, a project manager at The ServiceMaster Co. in Downers Grove, Ill., said he expects that most of his company's new development will be on WebLogic, so portability isn't a huge concern.

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"Would I prefer that the tool was absolutely open? Absolutely. Can I live with it this way? Yeah," Gallaher said. "I mean, what's my alternative? Do it in Microsoft, where they control everything?"

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SOURCES: BEA, JAVA COMMUNITY PROCESS

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– Carol Sliwa

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ONE ON ONE

Computerworld interviews BEA CEO Alfred Chuang

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BRIEFS

EMC, Hitachi End Patent Dispute

EMC Corp. and Hitachi Ltd. agreed to settle dueling patent-infringement claims related to storage technology. Hitachi will make unspecified "balancing payments" to EMC as part of a patent cross-licensing deal, the companies said. They also agreed on a framework for exchanging application programming interfaces (API), and EMC announced a similar API deal with Veritas Software Corp. in Mountain View, Calif.

3Com Sells Off Carrier Products

3Com Corp. announced a deal to sell the key assets of its CommWorks business unit to UTStarcom Inc. in Alameda, Calif., for $100 million in cash. CommWorks makes IP-based networking equipment for telecommunications carriers. Santa Clara, Calif.-based 3Com said it will retain a license to the technology.

Palm Says Sales Will Miss Target

Blaming weak sales of its handheld devices to corporate users, Palm Inc. warned that it will report lower-than-expected revenue for its third quarter, which ended Feb. 28. Milpitas, Calif.-based Palm said revenue will total about $210 million, falling short of its $230 million to $250 million prediction. Analysts recently said the corporate market for handhelds has stagnated [QuickLink 36045].

Short Takes

IBM recalled about 56,000 PC monitors sold in 1997 and 1998 because of a faulty component that could overheat. . . . San Francisco-based MACROMEDIA INC. warned of a security flaw in Version 6 of its Flash Player software and urged users to install an updated release.

AT&T Launches VPN Service Based on SSL

Aventail's remote-access devices to be used to expand networking choices

BY MATT HAMBLEN

AT&T Corp. today plans to join forces with Aventail Corp. by announcing a deal to resell that company's new Secure Sockets Layer (SSL) remote-access devices as part of a managed virtual private network (VPN) service.

NETWORK SERVICES

AT&T said it will charge customers a monthly fee for the SSL VPN service and put the fee on one bill along with its other network services and connection costs. Seattle-based Aventail will install and service its rack-mountable EX-1500 appliance, which is designed to eliminate the need for end users to install remote-access client software on laptop PCs and other mobile computing devices.

The reseller agreement made sense partly because the two companies share many global customer accounts, said John Sullivan, extranet product manager at AT&T. Sullivan wouldn't divulge the pricing for the new VPN service, which is due to be rolled out as early as next month. Aventail set a starting price of $20,000 on the EX-1500 when the SSL-based appliance was announced in January [QuickLink 35527].

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TECHNOLOGY DETAILS

Steel-Belted Radius Appliance

$7,500
available now

Version 4.0 of Funk's Steel-Belted Radius/Enterprise Edition software

Network Engines' 1U (1.75-in.) rack-mountable device, running an 866-MHz Intel Pentium III processor

Microsoft Windows 2000 Professional

Continued from page 1

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– *Carol Sliwa*

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Continued from page 1

Real-Time Data

system that would provide more rapid access to data, but it has yet to make any technology choices.

Top-level corporate executives increasingly want to keep a close watch on key business-performance indicators so they can take fast action when necessary, said Sateesh Lele, chairman of Global Data Systems USA, a San Jose-based IT services firm. "In order to do that, they need to have summarized, synthesized, real-time information," Lele said.

For example, if there's a drought in the Northeast, the use of real-time information to gauge demand for umbrellas could help executives at an umbrella maker du "dynamic pricing" in an attempt to boost sales, said Steve Andriole, a consultant at Cutter Consortium in Arlington, Mass., and a professor of IT management at Villanova University in Pennsylvania.

There are combinations of technologies that can help put business performance information in the hands of senior management more quickly, including middleware, business process integration tools, Web services applications and data mining tools. But they go only so far in speeding up the delivery of data, according to analysts. For instance, information stored in decision-support data marts is often up to a month old, Lele said.

In addition, many companies have rolled out enterprise resource planning systems that are tied to legacy applications populated with outdated information. "You still haven't solved your real-time problem," said Andriole, a former chief technology officer at Cigna Corp. in Philadelphia.

Some companies have made big strides toward achieving real-time data availability. Atlanta-based Delta Air Lines Inc., which has invested $1.5 billion in its IT infrastructure since 1998, has integrated its systems so tightly that there's just a one-second latency in exchanging data between some of its business units, said CIO Curtis Robb during a session at the Premier 100 conference.

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Still, some of the challenges facing IT managers who are trying to install real-time data access capabilities extend beyond technology to issues such as the quality and timeliness of information. For instance, Chris McMahan, CIO at Wireless Retail Inc., a Scottsdale, Ariz.-based provider of wireless products and services to retailers, said a salesman might report that he sold 10 wireless devices in a week when, in fact, he sold eight and has two orders in the pipeline.

"Every company I know of has to deal with the fudge factor," Andriole said. "Some cynics say that real-time reporting is terrible because it gives you the ability to make wrong decisions faster." ◗

How to Manage Real-Time Data

- Don't try to transform all operational data into real-time information. Instead, focus on areas where timeliness matters most, such as sales and inventory data.
- Be careful that you're not just delivering old or outdated information more efficiently to your CEO and other business executives.
- Don't rely too heavily on technologies such as EAI and Web services as agents of change. Cultural and business process issues are just as important, if not more so.
- Make sure that there's a business case for real-time reporting initiatives and that business leaders take ownership of them.

Inventory Costing Systems Pose Real-Time Data Challenges

Another problem hampering IT managers who are trying to make data available to business executives on a real-time basis is their companies' reliance on legacy accounting systems that are centered on so-called standard costing metrics.

Standard costing is an accounting technique that's widely used by manufacturers to predict the cost of product inventories for a full year based on the prices that are in place at the end of the previous year.

But applications that support the technique have limits, said Ralph Rio, an analyst at ARC Advisory Group Inc. in Dedham, Mass. For example, disk drives sold by a vendor may fetch $500 each at the end of one year – a price that will be built into the standard costing models in its accounting system. But if market conditions change and prices have to be cut sharply, the new information typically won't be reflected in the costing models.

That can be "a major problem" when it comes to using real-time information to react to changing market conditions, Rio said. To combat such problems, an emerging class of applications is able to accommodate real-time changes in costing data, he said.

Nevertheless, companies will likely have to also retain their legacy accounting systems in order to meet the U.S. Securities and Exchange Commission's financial reporting requirements, Rio added.

– *Thomas Hoffman*

Utility Turns to EAI Tools To Revamp Supply Chain

Integration software to support real-time data exchanges

BY THOMAS HOFFMAN

Southern Co., a $10.55 billion utility and energy services firm in Atlanta, is in the early stages of a multiyear enterprise application integration (EAI) effort aimed at bolstering revenue and lowering costs throughout its extensive supply chain operations.

As part of a project that began last year and is due to continue through 2006, Southern is pushing to add real-time energy trading capabilities and optimize all of its key supply chain functions, including warehousing and inventory and freight management.

To support the effort, Southern late last year installed business process integration software developed by Sunnyvale, Calif.-based Vitria Technology Inc. The details of the rollout will be announced this week. Southern plans to use Vitria's BusinessWare tools to provide real-time exchanges of purchasing data between its systems and those of its business partners through an energy trading network operated by Pantellos Group LP in The Woodlands, Texas.

"We're trying to manage the sourcing process from the raw materials phase all the way to the disposal of any assets that we've acquired," said Jacki Lowe, vice president of supply chain management at Southern, which is also using rival message-queuing middleware tools from IBM and Microsoft Corp. as part of the project.

Lowe said the EAI initiative is aimed at providing Southern's business executives with greater visibility into all of its supply chain operations. The project should also simplify some IT functions, she added.

For instance, Southern's accounting materials and procurement system links to 75 different work-order and accounting applications throughout the company. In turn, many of those systems are tied to applications at Southern's suppliers and other business partners.

But anytime a change is made to one work-order system, follow-on changes have to be made to the accounting systems to which it's connected, Lowe said. The use of BusinessWare should help minimize the changes "and reduce some of our support costs for those systems," she said.

Lowe declined to disclose how much Southern is investing in the EAI project, nor would she estimate the size of the payback and efficiency improvements that the company expects to gain.

Zarko Sumic, a Bellevue, Wash.-based analyst at Meta Group Inc., said a growing number of energy companies with extensive transmission and distribution businesses are beginning to understand the potential for using EAI technology to help make their operations more efficient.

Once BusinessWare is fully operational, Southern next quarter plans to begin developing interfaces to systems at some of its energy trading partners, Lowe said. The company expects to start processing transactions through the interfaces in June, she added. ◗

AT A GLANCE

Southern's Supply Chain Push

COMPANY FACTS: Sells electricity and natural gas to 4 million customers in the Southeast; had revenue of $10.55B last year

BUSINESS CHALLENGE: Improving its supply chain by lowering costs and providing better reliability to customers

IT STRATEGY: Embarked on a multiyear EAI effort that includes the use of Vitria's business process integration tools and middleware from IBM and Microsoft

Continued from page 1

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Top-level corporate executives increasingly want to keep a close watch on key business-performance indicators so they can take fast action when necessary, said Sateesh Lele, chairman of Global Data Systems USA, a San Jose-based IT services firm. "In order to do that, they need to have summarized, synthesized, real-time information," Lele said.

For example, if there's a drought in the Northeast, the use of real-time information to gauge demand for umbrellas could help executives at an umbrella maker do "dynamic pricing" in an attempt to boost sales, said Steve Andriole, a consultant at Cutter Consortium in Arlington, Mass., and a professor of IT management at Villanova University in Pennsylvania.

There are combinations of technologies that can help put business performance information in the hands of senior management more quickly, including middleware, business process integration tools, Web services applications and data mining tools. But they go only so far in speeding up the delivery of data, according to analysts. For instance, information stored in decision-support data marts is often up to a month old, Lele said.

In addition, many companies have rolled out enterprise resource planning systems that are tied to legacy applications populated with outdated information. "You still haven't solved your real-time problem," said Andriole, a former chief technology officer at Cigna Corp. in Philadelphia.

Some companies have made big strides toward achieving real-time data availability. Atlanta-based Delta Air Lines Inc., which has invested $1.5 billion in its IT infrastructure since 1998, has integrated its systems so tightly that there's just a one-second latency in exchanging data between some of its business units, said CIO Curtis Robb during a session at the Premier 100 conference.

> **"Every company I know of has to deal with the fudge factor."**
>
> **STEVE ANDRIOLE,** CONSULTANT, CUTTER CONSORTIUM

Still, some of the challenges facing IT managers who are trying to install real-time data access capabilities extend beyond technology to issues such as the quality and timeliness of information. For instance, Chris McMahan, CIO at Wireless Retail Inc., a Scottsdale, Ariz.-based provider of wireless products and services to retailers, said a salesman might report that he sold 10 wireless devices in a week when, in fact, he sold eight and has two orders in the pipeline.

"Every company I know of has to deal with the fudge factor," Andriole said. "Some cynics say that real-time reporting is terrible because it gives you the ability to make wrong decisions faster."

Inventory Costing Systems Pose Real-Time Data Challenges

Another problem hampering IT managers who are trying to make data available to business executives on a real-time basis is their companies' reliance on legacy accounting systems that are centered on so-called standard costing metrics.

Standard costing is an accounting technique that's widely used by manufacturers to predict the cost of product inventories for a full year based on the prices that are in place at the end of the previous year.

But applications that support the technique have limits, said Ralph Rio, an analyst at ARC Advisory Group Inc. in Dedham, Mass. For example, disk drives sold by a vendor may fetch $500 each at the end of one year – a price that will be built into the standard costing models in its accounting system. But if market conditions change and prices have to be cut sharply, the new information typically won't be reflected in the costing models.

That can be "a major problem" when it comes to using real-time information to react to changing market conditions, Rio said. To combat such problems, an emerging class of applications is able to accommodate real-time changes in costing data, he said.

Nevertheless, companies will likely have to also retain their legacy accounting systems in order to meet the U.S. Securities and Exchange Commission's financial reporting requirements, Rio added.

– Thomas Hoffman

Utility Turns to EAI Tools To Revamp Supply Chain

Integration software to support real-time data exchanges

BY THOMAS HOFFMAN

Southern Co., a $10.55 billion utility and energy services firm in Atlanta, is in the early stages of a multiyear enterprise application integration (EAI) effort aimed at bolstering revenue and lowering costs throughout its extensive supply chain operations.

As part of a project that began last year and is due to continue through 2006, Southern is pushing to add real-time energy trading capabilities and optimize all of its key supply chain functions, including warehousing and inventory and freight management.

To support the effort, Southern late last year installed business process integration software developed by Sunnyvale, Calif.-based Vitria Technology Inc. The details of the rollout will be announced this week. Southern plans to use Vitria's BusinessWare tools to provide real-time exchanges of purchasing data between its systems and those of its business partners through an energy trading network operated by Pantellos Group LP in The Woodlands, Texas.

"We're trying to manage the sourcing process from the raw materials phase all the way to the disposal of any assets that we've acquired," said Jacki Lowe, vice president of supply chain management at Southern, which is also using rival message-queuing middleware tools from IBM and Microsoft Corp. as part of the project.

Lowe said the EAI initiative is aimed at providing Southern's business executives with greater visibillty into all of its supply chain operations. The project should also simplify some IT functions, sbe added.

For instance, Southern's accounting materials and procurement system links to 75 different work-order and accounting applications throughout the company. In turn, many of those systems are tied to applications at Southern's suppliers and other business partners.

But anytime a change is made to one work-order system, follow-on changes have to be made to the accounting systems to which it's connected, Lowe said. The use of BusinessWare should help minimize the changes "and reduce some of our support costs for those systems," she said.

Lowe declined to disclose how much Southern is investing in the EAI project, nor would she estimate the size of the payback and efficiency improvements that the company expects to gain.

Zarko Sumic, a Bellevue, Wash.-based analyst at Meta Group Inc., said a growing number of energy companies with extensive transmission and distribution businesses are beginning to understand the potential for using EAI technology to help make their operations more efficient.

Once BusinessWare is fully operational, Southern next quarter plans to begin developing interfaces to systems at some of its energy trading partners, Lowe said. The company expects to start processing transactions through the interfaces in June, she added.

AT A GLANCE

Southern's Supply Chain Push

COMPANY FACTS: Sells electricity and natural gas to 4 million customers in the Southeast; had revenue of $10.55B last year

BUSINESS CHALLENGE: Improving its supply chain by lowering costs and providing better reliability to customers

IT STRATEGY: Embarked on a multiyear EAI effort that includes the use of Vitria's business process integration tools and middleware from IBM and Microsoft

Antitrust Suit Widens Cartridge Battle

BY PATRICK THIBODEAU

A North Carolina company that remanufactures toner cartridges has filed an antitrust lawsuit against printer maker Lexmark International Inc., broadening a legal fight that could affect the availability of low-cost cartridges.

Sanford, N.C.-based Static Cootrol Components Inc. (SCC) claims that Lexmark is trying to monopolize the cartridge market. SCC's allegation comes after Lexington, Ky.-based Lexmark filed a suit in December charging that the remanufacturer illegally copied some of the chips used to mate cartridges to Lexmark's printers [QuickLink 36030].

Lexmark won the first round in a Feb. 28 ruling by a U.S. District Court judge in Kentucky. The judge issued a preliminary injunction that bars SCC from making the chips used in replacement cartridges for two of Lexmark's laser printers. SCC filed its antitrust claim that same day in Greensboro, N.C.

Congress Takes Notice

The legal battle is getting congressional attention because of Lexmark's attempt to protect its toner cartridges by citing the Digital Millennium Copyright Act (DMCA), a 1998 law aimed at stopping music and movie piracy.

In an interview, Rep. Rick Boucher (D-Va.) said the case illustrates the law's shortcomings and charged Lexmark with using the DMCA to "thwart competition" — a charge that Lexmark denied.

One of Lexmark's key complaints is that SCC, in reproducing the printer chips, violated the DMCA by circumventing "secret handshake" authentication software built into the devices by Lexmark.

But DMCA critics contend that such authentication protections could be applied to a range of software and hardware products. In January, Boucher reintroduced legislation that aims to change the DMCA's circumventioo restrictions, and last week he sent a letter to House members citing his concerns about Lexmark's use of the DMCA.

In its suit, SCC claims that Lexmark's alleged anticompetitive practices are squeezing companies that remanufacture toner cartridges out of the market. To buttress that claim, SCC argued that about 35% of the toner cartridges sold for use with Hewlett-Packard Co.'s printers are remanufactured, compared with about 14% for Lexmark's.

Roger Rydell, a Lexmark spokesman, said the company "provides more choice in cartridges for laser printers" than any of its rivals. ▶

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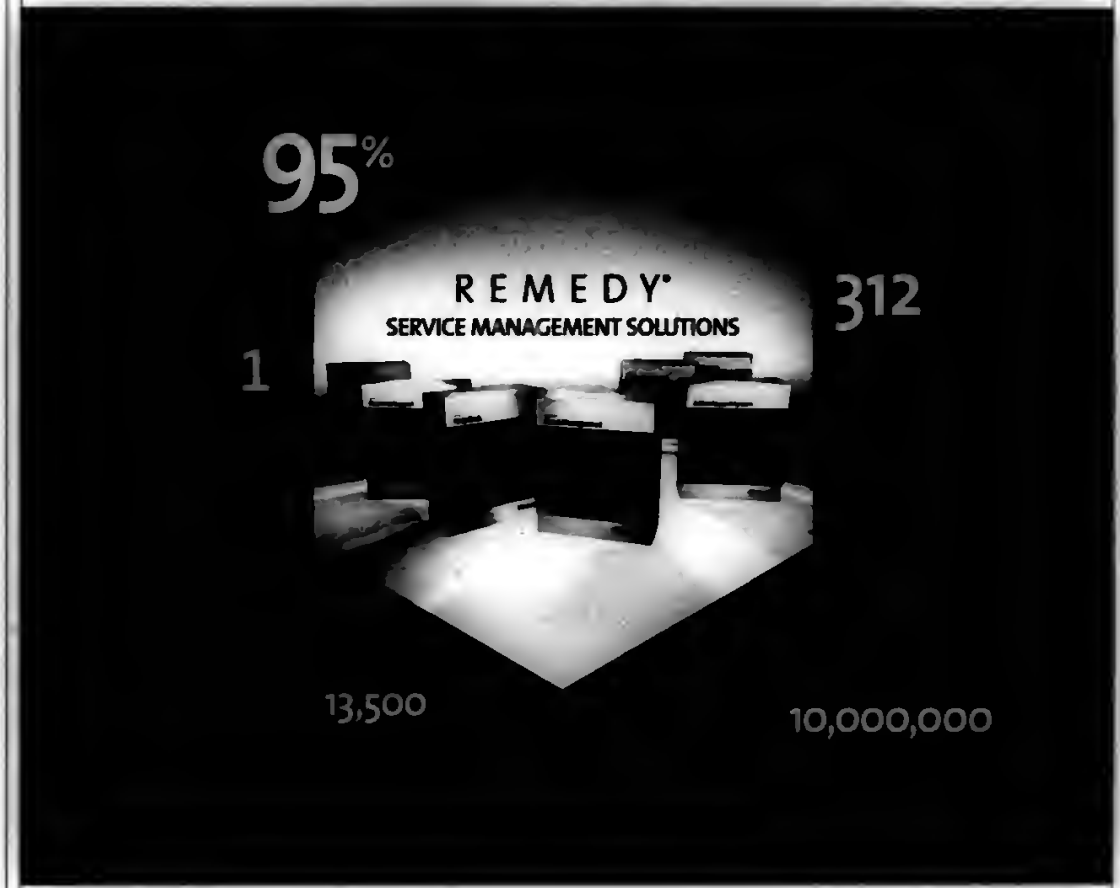

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Dell's Storage Chief Pushes for Fast Growth

BY DON TENNANT
SCOTTSDALE, ARIZ.

As the executive in charge of Dell Computer Corp.'s storage unit, **Russ Holt** *manages what he calls an "emerging" business that already produces revenue of $1 billion per year. At a recent conference held here by Cambridge, Mass.-based Forrester Research Inc., Holt, vice president and general manager of Dell's Enterprise Systems Group, spoke with Computerworld about where Dell's storage foray is heading.*

Given that many companies are undergoing server consolidation by means of augmenting their storage resources, do you see Dell's storage group taking any business away from its server group? There is a trend toward consolidation, but we don't see it necessarily as fewer servers. There's no lack of necessity still for the computing capability and the applications, but from the CIO's perspective, it was becoming very difficult for him to manage that. What we've seeo is a trend toward rack-dense or rack-optimized servers; the form factors have changed. And what we've typically found is that customers are adding new projects and applications for productivity, so it tends to offset the consolidatioo that's happening.

But you do see server consolidation as a driver for your storage business? Absolutely. It's an easier-to-manage, more effective use of disk space. You can have one administrator supporting 6TB as opposed to just being able to support 1TB before.

What percentage of Dell's business is storage at this point? We're over $1 billion in annual revenue for our external storage. Dell's total reveoue is over $30 billion, so storage is a small portion right now. But we look at it in the whole cootext of our enterprise business, which now accounts for about 20% of our total reveoue.

What will your storage business look like in five years? From the standpoint of product capabilities, it will just be to continue to monitor and adjust with the trends. We have a very complete portfolio of storage products right oow.

What is your monitoring of the iSCSI trend telling you? The standard for iSCSI was just ratified a month ago [QuickLink 36334]. These emerging technologies tend to take off a lot slower than most analysts would like them to. I don't expect that iSCSI is going to replace Fibre Channel. However, there are some clear uses where iSCSI will provide some benefits. The first environmeot is in wide-area connectivity for SANs [storage-area networks]. Another use is providing [block-level data] support oo network-attached storage [NAS]. Currently, NAS boxes are only file-based access.

How about the InfiniBand I/O technology? It's one of those products in the very early stages of standardization, so it's oot aomething that's going to happeo overnight. As the modular blade-type servers start to standardize a bit more, we think InfiniBand will play a key role in the system-level communicatioo betweeo servers. We doo't see InfiniBand taking over storage intercoonects like Fibre Channel; we don't see it taking over the network like IP. But it will be an important transport medium between modular servers.

So would your strategy be to let IBM and Sun test the InfiniBand waters or to jump in first? We're working on InfiniBand-related products ourselves; we won't oecessarily wait for IBM or Sun to pave the way. But we're also very keen on delivering relevant technology. InfiniBand is relevant, but the timing is what we're working through right oow.

How do you see your relationship for reselling EMC's Clarion midrange arrays evolving over the next few years? We entered into the relationship in October of 2001; the tenets that led us to the relationship hold and have been validated. [Dell's] view [is] that all technology is progressing along a standardization curve. The area where there's still a lot of complexity and a lack of standards is in the Fibre Channel SAN area. From a Dell perspective, that's not an area where we want to invest a lot of our own resources, because there aren't standards there. So we chose to partner with EMC.

What's going to be new from Dell storage-wise over the next year? You'll see Fibre Channel-connected ATA [Advanced Technology Attachment] drives coming from Dell and EMC in the first half of this year. That will allow customers to continue to put their business applications and mission-critical data on core Fibre Channel systems but have the capability for snapshots or mirroring [on] less expensive disks. That will progress to Serial ATA starting to show up in the latter part of the year and serial-attached SCSI devices about a year after that. ◗

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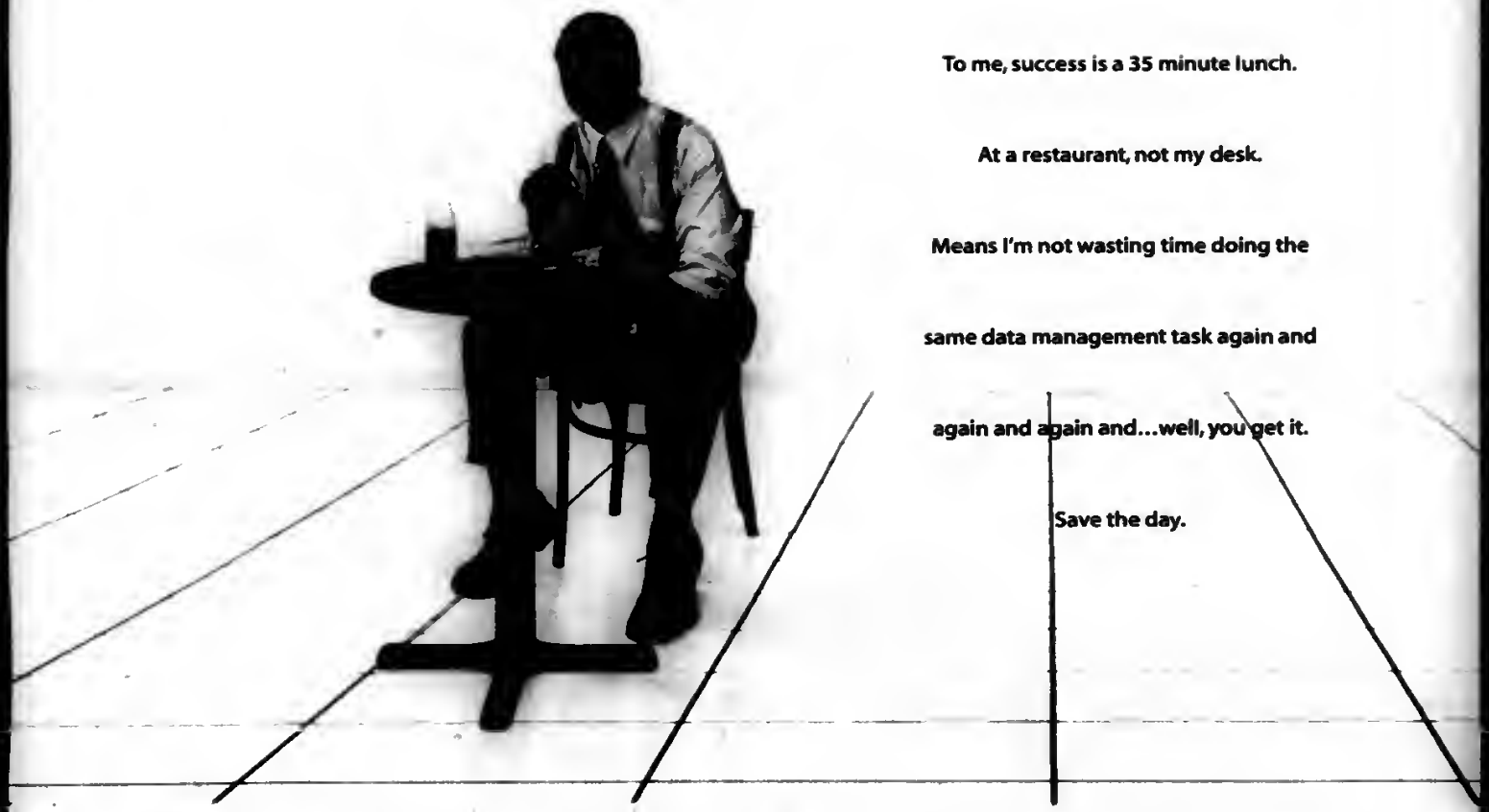

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WAR. IS THERE A MORE sobering word? A more terrifying prospect? Today, the threat hangs heavy in the air, clouding conversation, darkening our doorways and liable to fall upon all our heads at any moment.

As the Bush administration marches resolutely into the stiff wind of global disapproval, we're all steeling ourselves for the impact — of what we don't yet know.

For reservists, it could mean a call to duty. As a neighbor once said to me, "It may look like we're just fooling around out here one weekend a month, but we're not. This is serious stuff." Indeed. He got called up almost a year ago.

Although most of us won't be slinging an M-16 over our shoulders, the threat of war changes everything. Especially for IT. Sure, we've already spent the past two years operating under some very trying circumstances, so you might wonder how much tougher it can get.

That depends mainly on two things: how prepared you are to secure and defend your company's digital assets and infrastructure, and whether, and how long, we go to war.

Duct tape and plastic sheeting aside, there are real steps you can take. The key for IT leaders, notes French Caldwell, a research director at Gartner, is that in an era when events in the physical world are reflected online, systems connected to the Internet are particularly vulnerable. Take Delta Air Lines' estimate of 500 attempts daily to break into its systems or the recent theft of an estimated 8 million credit card numbers from Data Processors International. Remember the speed and reach of the Slammer worm.

The issue seems less the much-hyped cyberterrorism, and more the need to secure critical enterprise infrastructure and data from hactivists, new viral strains and physical assault.

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If the war drags on, IT will be fighting a battle on two fronts: economic and security:

- A lengthy engagement is expected to bring spending and the economy to a virtual standstill while pushing oil prices skyward, negatively affecting corporate budgets.
- As the threat of physical and cyberterrorist attacks spirals, some companies may want to look into biometric physical security devices.

You never know when a war-related incident could give new meaning to the term *agile corporation*. As former cybersecurity czar Richard Clarke often reminded us, the nation is counting on the private sector to combat threats to our critical infrastructure. Don't be caught unaware. ◗

WARNING SIGNS from your PROSPECTIVE VENDOR
Shows up late, blames it on "Nobody picks up hitchhikers anymore."
References giggle.
Asks if you're going to finish your coffee.
When asked about any potential acquisitions, replies, "I wish."
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PIMM FOX

Worse Than Death and Taxes?

THREE THINGS IN LIFE are certain: Death, taxes and lost data.

If you're an IT executive, this third bane of your existence probably isn't going to get much worse. But if you're in finance, new regulations governing the retention and management of internal and external communications might make it seem worse than death or taxes.

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The quandary for IT departments is how to compile the arsenal of software and hardware tools necessary to capture, store and easily retrieve the oceans of data sloshing around a financial services firm. For example, Merrill Lynch had more than 57,000 employees in 36 countries at the beginning of 2002. That's a lot of people communicating in a variety of ways to many other individuals.

This communications tracking and management costs big bucks, according to Charles Brett, a senior program director at Meta Group. He estimates that a firm with 5,000 brokers generates about 20GB to 50GB of e-mail *per day* to be stored on nonerasable optical tapes. "Each WORM [write-once, read-many] tape holds about 9GB," Brett says. "So you might be looking at $150 to $500 a day, every day, and that's just the cost of the disks."

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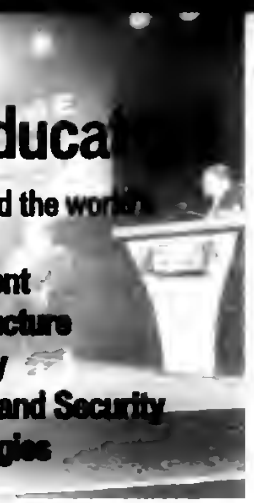

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IBM Corporation

JOHN MCARTHUR
Group Vice President
IDC Storage Research

FRED VAN DEN BOSCH
EVP & CTO
VERITAS Software

Agenda Snapshot*

For details, updates, and to register visit www.snwusa.com/expo

*subject to change

Monday, April 14
(Pre-Conference Activity and Tutorial Sessions)

9:30am-11:00am	Primer
12:00pm-5:00pm	Golf Outing
1:00pm-2:00pm	SNIA Tutorial Sessions - choose from five different sessions
2:00pm-2:10pm	Break
2:10pm-3:10pm	SNIA Tutorial Sessions - choose from five different sessions
3:10pm-3:20pm	Break
3:20pm-4:20pm	SNIA Tutorial Sessions - choose from five different sessions
4:20pm-4:30pm	Break
4:30pm-5:30pm	SNIA Tutorial Sessions - choose from five different sessions
7:00pm-9:00pm	Pre Conference Networking Reception

Tuesday, April 15
(General Conference - Day One)

7:15am-8:15am	Continental Breakfast
8:30am-9:15am	Opening Keynote: Regis McKenna
9:15am-12:00pm	General Sessions
12:15pm-1:30pm	Networking Luncheon
1:45pm-4:00pm	General Sessions
4:00pm-5:30pm	Technical, Technical/Business and Business Tracks
5:30pm-8:30pm	Expo Buffet Dinner, Interoperability and Solutions Demo

Wednesday, April 16
(General Conference - Day Two)

7:15am-8:15am	Continental Breakfast
8:30am-9:05am	Opening Keynote: David Chamberlain
9:15am-12:00pm	General Sessions
12:00pm-1:30pm	Expo Buffet Luncheon
12:00pm-7:15pm	Interoperability and Solutions Demo Open
1:45pm-3:50pm	General Sessions
3:50pm-4:00pm	Break
4:00pm-5:00pm	Technical, Technical/Business and Business Tracks
5:15pm-7:15pm	Expo Open
7:30pm-9:00pm	Gala Evening

Thursday, April 17
(Tutorial and Workshop Sessions)

7:30am-8:30am	Continental Breakfast
8:30am-11:45am	Technical, Technical/Business and Business Tracks
11:45am	Conference Concludes

Register Today!

Options for IT End-Users*	Pre-Registration (through April 11th)	On-Site Registration (after April 11th)
General Conference Package (Apr 15, 16) (Includes Expo Meals and Receptions)	$1,095	$1,245
Total 4-day Package (Apr 14, 15, 16, 17)* (Includes General Conference Package Technical and Business Tracks SNIA-produced Tutorials, SNIA-Certification "Test-Ready" Courses, Expo Meals and Receptions)	$1,490	$1,690
Options for IT Vendors**		
Total 4-day Package (Apr 14, 15, 16, 17) (Available to Sponsoring Vendors and their Resellers/Integrators; Industry Consultants and Storage Solutions Implementors)	$1,490	$1,690
Non-Sponsoring/Exhibiting Vendor Package*	$5,000	$5,000

* See IT End-Users description on the Registration Application on the reverse. ** See Non-Sponsoring Vendor description on the Registration Application on the reverse.

Submit your nomination today at
www.snwusa.com
or email Nanette Jurgelewicz at
nanette_jurgelewicz@computerworld.com

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IDG Travel is the official travel company for Storage Networking World. They are your one-stop shop for exclusive discounted rates on hotel accommodations.

To reserve your accommodations:
visit www.stcentral.com OR
call 1-800-340-2262 (or 1-508-820-8159)

Pre-Conference Golf Outing

Complimentary for Registered IT Users

The Pre-Conference Golf Outing at The Palmer Course at Wildfire, located at the JW Marriott Desert Ridge Resort, is complimentary ($165 value) for registered IT End-Users (other participants, including sponsors and vendors, may play on an "as available" basis and are responsible for all applicable golf outing expenses)

For details: contact Chris Leger at 1-508-820-8277

STORAGE NETWORKING WORLD

April 14-17, 2003
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Application for Conference Registration

TO REGISTER:
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- **Or register online at www.snwusa.com/expo**
- **You will receive a confirmation via email**

QUESTIONS?
- **Call: our Customer Service Line at 800-883-9090**
- **Email: snwreg@computerworld.com**

CODE: EXPO

Options for IT End-Users*	Pre-Registration (through April 11th)	On-Site Registration (after April 11th)
General Conference Package (Apr. 15, 16) (Includes Expo, Meals and Receptions)	❑ $1,095	❑ $1,245
Total 4-day Package (Apr. 14, 15, 16, 17) (Includes General Conference Package, Technical and Business Tracks, SNIA-produced Tutorials, SNIA-Certification "Test Ready" Courses, Expo, Meals and Receptions)	❑ $1,490	❑ $1,690
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* IT End-Users are defined as those who are attending Storage Networking World with an intent (and an IT spending budget) to potentially buy/purchase hardware/software/services/etc. from any conference sponsors and exhibitors. As such, account representatives/business development from any company, analysts, venture capitalists, and anyone else attending who does not have IT purchasing influence within their organization are excluded from the "IT End-User" designation. Enforcement of this interpretation and policy is at the sole discretion of Computerworld. Questions? Please call 1-800-883-9090.

** Vendors are encouraged to participate at Storage Networking World through sponsorship. (Details are available by calling Ann Harris at 1-508-820-8667.) Alternatively, vendors (as well as venture capitalists, equity analysts, and other "non-IT end-user" professionals as defined by Computerworld), may apply for registration at the "non-sponsoring vendor" rate. Determination of what constitutes a "non-sponsoring vendor" registration is at the sole discretion of Computerworld. You will also be required to adhere to any non-solicitation policy posted on-site.

Registration Information: (This section must be completed in order to process your application)

First Name: _____ Middle Initial _____ Last Name _____

Title: _____ Company: _____

Street Address: _____ Suite, Apt., etc.: _____

City: _____ State/Prov: _____ Zip/Postal Code: _____

Country: _____ Phone Number: _____ Extension: _____

Fax Number: _____ E-Mail Address: _____

Badge Name: _____ ❑ Special Services Required? (Please attach written description)

Would you like to receive information about playing in the golf outing on Monday, April 14th (PM)? ❑ Yes ❑ No

Please indicate your preferred conference shirt size: ❑ S ❑ M ❑ L ❑ XL ❑ XXL ❑ XXXL

Attendee Profile: (This section must be completed in order to process your application)

SECTION A - FOR IT END-USERS ONLY

Your Business/Industry:
- ❑ Transportation/Utilities
- ❑ Mining/Oil/Gas
- ❑ Media/Publishing
- ❑ Banking/Finance/Insurance
- ❑ Telecommunications
- ❑ Wholesale/Retail (Non-IT)
- ❑ Advertising/Marketing/Public Relations
- ❑ Education
- ❑ Government/Military
- ❑ Healthcare
- ❑ Manufacturing (Non-IT)
- ❑ Other

Your Job Title/Function:
- ❑ CEO/COO/Chairman/President
- ❑ CIO/CTO
- ❑ VP/GM/Director
- ❑ IS/IT Director/Manager
- ❑ Other IS/IT Department Manager/Supervisor
- ❑ Other Corporate/Business Manager
- ❑ Corporate/Business Staff
- ❑ Consultant (Internal) or Other

Select item below that most closely matches your involvement in IT decisions:
- ❑ Specify features/Technical requirements
- ❑ Evaluate/Recommend Products, Brands, Vendors
- ❑ Create strategy/Determine the need to purchase
- ❑ Set budget for expenditure
- ❑ Authorize/Approve purchase
- ❑ None of the above

Employees in your entire Company:
- ❑ 10,000+
- ❑ 5,000 - 9,999
- ❑ 1,000 - 4,999
- ❑ 500 - 999
- ❑ 100 - 499
- ❑ Less than 100

Estimated annual revenue of your entire company:
- ❑ $10 Billion+
- ❑ $5 Billion - $9.9 Billion
- ❑ $1 Billion - $4.9 Billion
- ❑ $500 Million - $999 Million
- ❑ $100 Million - $499 Million
- ❑ $50 Million - $99 Million
- ❑ Less than $50 Million

Annual company IT budget (All IT products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Annual company IT budget (Storage products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Your personal IT spending authority (All IT products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Your personal IT spending authority (Storage products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

SECTION B - FOR IT VENDORS ONLY

Your Business/Industry:
- ❑ VAR/VAD/ASP/System Integrator
- ❑ Industry Consultant/Storage Solution Integrator
- ❑ Manufacturing (IT)
- ❑ Computer Retailer/Dealer/Wholesaler
- ❑ Software Development (Storage)
- ❑ Other Computer Related (Non-Storage)

Your Job Title/Function:
- ❑ CEO/COO/Chairman/President
- ❑ CFO/Controller/Treasurer
- ❑ VP/GM/Director
- ❑ Sales/Marketing/Product Staff
- ❑ CIO/CTO/Other IS/IT Manager
- ❑ Engineering Staff
- ❑ Press

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Signature of Card Holder: _____

Cancellation Policy (*All of the below options require written notification.*)
In the event of cancellation, the registrant has three options.
1) He or she may substitute another attendee for that conference.
2) He or she may transfer this registration to the Fall 2003 Storage Networking World conference if written notice is received by March 31, 2003.
3) The registration fee will be refunded, less $200 service charge, if written notice is received by March 31, 2003.

Computerworld reserves the right to limit and/or refuse any registration for any reason.

Schedule of Conference Events (subject to change)

Monday, April 14, 2003
- Pre-Conference Golf Outing
- Pre-Conference Networking Reception
- Tutorial Sessions

Tuesday, April 15, 2003
- General Conference
- Interoperability and Solutions Demo
- Exposition

Wednesday, April 16, 2003
- General Conference
- Interoperability and Solutions Demo
- Exposition
- Gala Evening

Thursday, April 17, 2003
- Tutorial Sessions

Unfortunately, few IT departments are being given meaningful guidance by compliance and legal departments about where and how to invest the money. So, many are relying on vendors to know what technology is or isn't required.

"There are some pretty immature solutions out there," says Brett.

It's possible to capture everything inbound and outbound, but capturing the internal stuff gets complicated. As a result, some companies are looking at this as a chance to re-evaluate e-mail at the enterprise level and initiate operational management of e-mail — for example, making users categorize e-mail before it's distributed and archived.

Brett says the most important questions for potential vendors are about scalability and ownership.

Can they demonstrate real scalable solutions, and what is their specific expertise? Without these answers, your communications aren't being given the attention the law demands. ■

THORNTON MAY

Save the Suits From Themselves

RUDY GIULIANI argued that the best way to fight crime is to fight the disorder that precedes it — those quality-of-life crimes such as spraying graffiti, panhandling, breaking windows, littering and letting buildings crumble and decay. I think you can make a similar argument that the best way to improve ROI for IT is to fight the mental disorder that burdens IT's reputation — those quality-of-mind crimes such as underinvesting, overinvesting and bad personal information-management behavior.

What leads me to this line of thinking is some work I've been doing with Hal R. Varian, dean of the School of Information Management and Systems at the University of California, Berkeley. While conducting focused research in the financial services market, we found the highest mental crime areas to be the following:

- Information opportunity: Determining where IT money should be spent.
- Application IQ: Spending the money on the right technologies.
- Information economics: Getting the best deal on the money we spend.

In recent years, the ability to purchase technology has run ahead of the typical organization's ability to extract maximum value from what it's been buying. The "whisper number" (the one no one likes to publicly acknowledge) for annual IT waste is around $75 billion. These are dollars spent yearly on failed IT projects. IT managers are certainly not blameless in this annual value sinkhole, but we frequently forget that for every dollar wasted, there were users — let's call them "Suits" — who were very close to the center, where choices were made and value was determined.

The unspoken dirty secret in IT waste: "It's not the technology. It's the Suits who are funding the technology." For the longest time, IT managers had a credibility problem with the business. But in reality, the inverse is true; the business has a credibility problem with IT.

John Adams, one of the political geniuses behind the Declaration of Independence, often wrote his much-loved wife, even during the darkest days of the American Revolution. In one note, he said, "We cannot guarantee success, but we can deserve it." The truly sad reality of the pregnant-with-opportunity age we live in is that most Suits don't deserve success from their investments in IT. They haven't laid the groundwork or done the homework necessary to develop good IT judgment.

The question facing IT leaders today is, What is the minimal obligation of IT to educate the Suits in the nontoxic or, at a minimum, nonwasteful use of information technologies?

Most IT shops have determined that they need do nothing more than train executives in the use of low-level desktop applications. This is the technology equivalent of a sixth-grade education. Technology literacy will become foundational to the economy of the future. Suits must know more about IT. IT leaders need to know more about what the Suits know and, more important, what they don't know about IT.

Regarding the technology literacy of executives, IT leaders need to determine the following:

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In advanced companies today, IT leaders are evaluating their peers on their technical competence. Your company should be doing it too. ■

WANT OUR OPINION?

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READERS' LETTERS

Measuring Risk

THE REPORT "Ridge Releases Cyberdefense, Physical Strategies" [QuickLink 36404] reflects the seriousness of the need for cybersecurity improvement - and the potential for regulatory intervention if the market fails to respond adequately. While government efforts to establish a cyberattack alert system are laudable, it is essential that both the private and public sectors get the kind of qualitative guidance, and associated risk metrics, that will enable them to identify, measure and manage the risks to their information technology and communications environments, and to get credible ROI data on information security investments. That means the establishment of the Generally Accepted System Security Principles. The principles are a standard population of threats and quantitative risk assessment tools that enable organizations to identify, measure and manage risk confidently, applying the long-accepted measure of business - ROI - to the broad array of safeguard and control investments for information security.

Will Ozier
President, OPA Inc., Fairfield, Calif.

Broad Expertise

DAVID FOOTE'S column "IT Job Trends Yield Surprises" [QuickLink 36015] was informative, but the way he compares specialists to generalists seems a bit shortsighted. In my experience, being an expert in one field has many important benefits, regardless of the job market. One is that people often consider experts to be expert in other, complementary fields. Another arises during the pursuit of expertise: You naturally acquire ancillary skills, which often make you a generalist as a side effect.

My own career is a good example. I have been a Borland Delphi specialist since Delphi's inception. I marketed myself only as such. As a Delphi "specialist," I performed Oracle, Interbase and Microsoft SQL Server database design, Web design (including JavaScript and Perl), telecommunications, project management and more.

Michael Nigohosian
President, McGillis, Wilcox, Webster & Co., Chicago (and author of The Secret Path to Contract Programming Riches*), m.nigohosian@mwwcorp.com*

Teleworking Loses Some Face Value

UNFORTUNATELY, since most companies still don't have a formal teleworking plan in place, most managers still view telecommuting as a perk that is an exception rather than the rule [QuickLink 36517]. After six years of successful telecommuting in the afternoons, I lost my last job because the conditions for retraining in the new system required daylong face time.

Ellen Cornell
Marblehead, Mass.

Following HIPAA

I HAVE BEEN LECTURING on HIPAA security and conducting compliance engagements since 1998. In the article "HIPAA Data Rules Leave Choices to IT" [QuickLink 36526], Karen Trudel of the Centers for Medicare & Medicaid Services is quoted as saying that encryption of health data transmitted over the Internet is no longer mandated and can be based on risk assessments by companies. Actually, the business impact of doctors' encrypting health data is ultralow, but doing so is probably the single best security control to protect data that can be used in a small practice. TruSecure's Marne Gordon is also off base in saying that litigation-wary companies might stick with paper instead of rolling out automated medical records. The HIPAA privacy rule covers health records in all formats, paper or electronic. There is no advantage to not using electronic records, because you are still required to protect the data.

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Thornton May is a long-time industry observer, management consultant and commentator. Contact him at [redacted]

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Magic Pixie Dust.
The miracle everyone
has waited for.

Magic Pixie Dust was all the rage. And why not? The directions said that with one pinch, servers would be imbued with "always on" capabilities. With another pinch, servers would be instantly gilded with more speed and performance. The servers would self-configure. They would never crash. Every server could connect with every other server in existence. Just one problem. The Pixie Dust didn't work.

AND THAT'S WHEN THEY CALLED IBM.

The IBM @server pSeries™ 650 running UNIX®. It can run multiple partitions that can be dynamically reconfigured. *On demand.* It's twice as powerful as the Sun Fire V880 in ERP.[1] And unlike Pixie Dust, it works. To learn more about the flexible p650 or to locate your IBM Business Partner, head over to **ibm.com**/eserver/p650

The p650.
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[1]IBM eServer pSeries 650 (8 processors, POWER4+, 1.45 GHz, 1.5 MB L2 cache per 2 processors, 64 GB memory) was certified by SAP on 1/16/03 with the following SAP Standard 4.6C SD application benchmark results: 1,220 SD benchmark users, 1.95 sec. average dialog response time, 122,670 fully business processed line items/hour, 368,000 dialog steps/hour, 6,130 SAPS, CPU utilization of 98% with DB2 v8.1 and AIX 5L version 5.2. Sun Microsystems Sun Fire V880 (8 processors, UltraSPARC III 900 MHz, 8 MB L2 cache, 32 GB memory) was certified by SAP on 6/17/02 with the following SAP Standard 4.6C SD application benchmark results: 600 SD benchmark users, 1.96 sec. average dialog response time, 60,330 fully business processed line items/hour, 181,000 dialog steps/hour, 3,020 SAPS, CPU utilization of 99% with DB2 v7 and Solaris 8. Results posted at http://www.sap.com/benchmark. [2]U.S. list price as of 2/28/03 for p650 Express Configuration with AIX 5L, 2-way 1.2 GHz POWER4+. Prices are subject to change without notice. Reseller prices may vary. IBM, the e-business logo, AIX 5L, DB2, eServer, POWER4+, pSeries and e-business on demand are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. UNIX is a registered trademark of The Open Group. Other company, product and service names may be trademarks or service marks of others.
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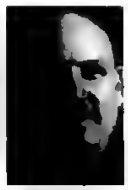
Compression Relieves Congestion
WAN traffic compression appliances promise to let network managers increase loads without upgrading WAN links. Users tell us how well they work. **Page 30**

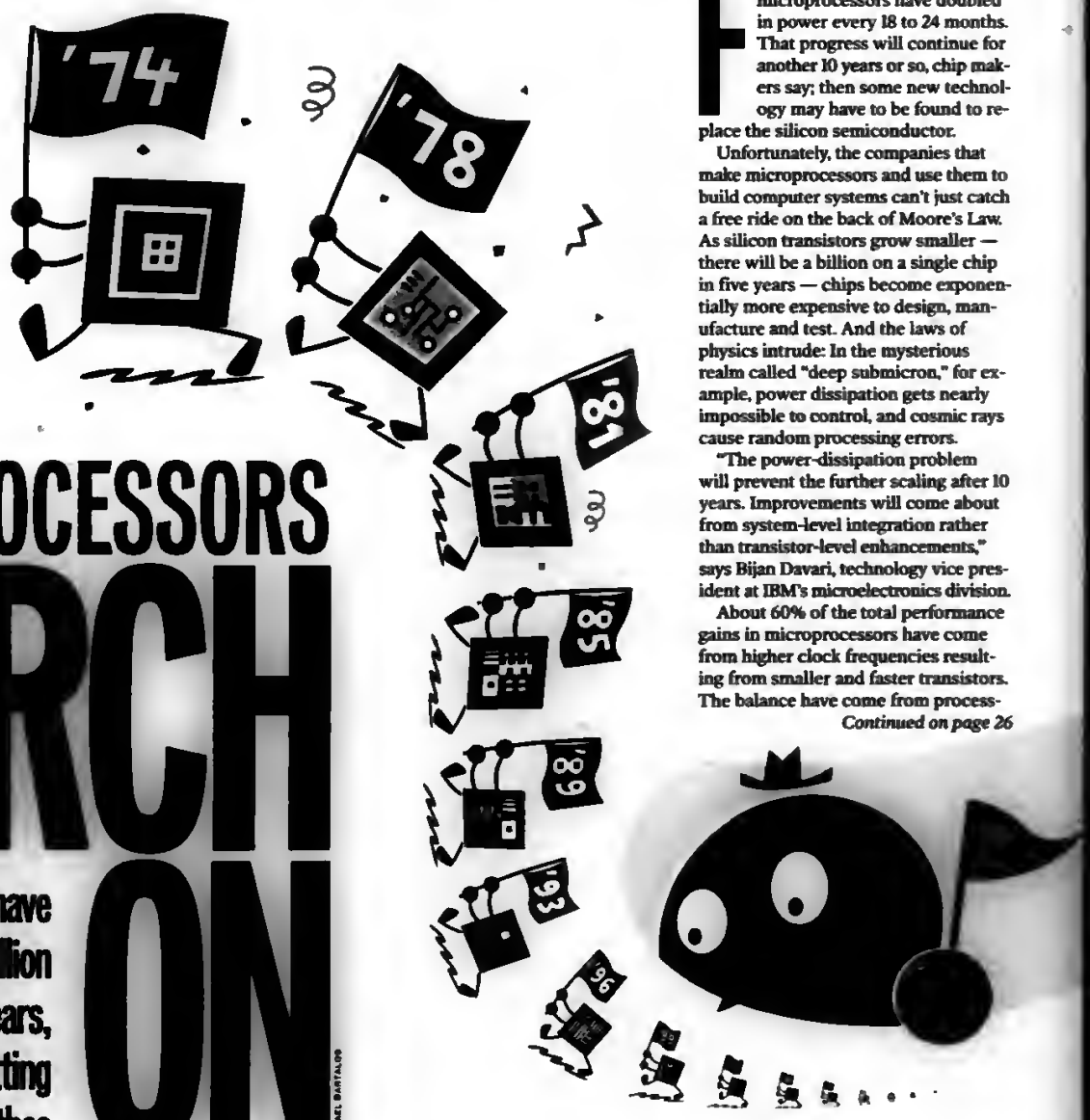
SECURITY MANAGER'S JOURNAL
When Bad Things Happen To Good Demos
A vendor's slick security product presentation shows Vince Tuesday that it doesn't have a clue what users want and need — or technology mature enough to deliver it. **Page 32**



OPINION
And Here's the Pitch
The beginning of baseball's spring training has Nicholas Petreley thinking about what might happen in a software World Series. **Page 37**

MICROPROCESSORS MARCH ON

Chip makers will have achieved 10 GHz and 1 billion transistors in five years, but progress is getting harder. By Gary H. Anthes



MICHAEL BARTALOS

FOR MORE THAN THREE DECADES, microprocessors have doubled in power every 18 to 24 months. That progress will continue for another 10 years or so, chip makers say; then some new technology may have to be found to replace the silicon semiconductor.

Unfortunately, the companies that make microprocessors and use them to build computer systems can't just catch a free ride on the back of Moore's Law. As silicon transistors grow smaller — there will be a billion on a single chip in five years — chips become exponentially more expensive to design, manufacture and test. And the laws of physics intrude: In the mysterious realm called "deep submicron," for example, power dissipation gets nearly impossible to control, and cosmic rays cause random processing errors.

"The power-dissipation problem will prevent the further scaling after 10 years. Improvements will come about from system-level integration rather than transistor-level enhancements," says Bijan Davari, technology vice president at IBM's microelectronics division.

About 60% of the total performance gains in microprocessors have come from higher clock frequencies resulting from smaller and faster transistors. The balance have come from process-

Continued on page 26

MICROPROCESSORS MARCH ON

Continued from page 25

ing architectures that allow the execution of more than one instruction per clock tick. A microprocessor can do that by predicting the flow of a program through several branches of program logic or by executing instructions "speculatively" — before they are needed. But pushing those tricks further is becoming difficult and expensive.

"We've gone from being able to execute two instructions at a time to eight or more," says James Hoe, a professor of electrical and computer engineering at Carnegie Mellon University in Pittsburgh. "But we are at the limit. The architecture is not scalable." Hoe says microprocessor developers will increasingly rely on the following ambitious schemes to find "parallelism" in programs and job streams:

- **Multithreading:** Breaking a single program into multiple instruction streams, or threads, to be processed simultaneously. Each thread could handle a data packet or transaction, for example.
- **Simultaneous multithreading:** A technique that makes a single physical processor appear to software as two processors, so two programs can execute simultaneously, boosting total throughput. Intel Corp. calls it "hyperthreading."
- **Chip multiprocessing:** The placement of two or more physical processor "cores" on one chip. The cores can run independently but share some resources. IBM is shipping a dual-core Power4 processor, and Sun Microsystems Inc. is expected to unveil one later this year in its UltraSPARC IV. Intel will introduce a dual-core Itanium chip in 2005.
- **Runtime optimization:** Using a combination of special processor circuits and a dynamic runtime compiler to continuously analyze program behavior and reorder instructions for better performance. While this doesn't make the processor run faster, it does improve what the user cares about: throughput.

"It's becoming exponentially expensive to find more parallelism in a single instruction stream," says Justin Rattner, an Intel senior fellow and director of microprocessor research. "So there will be increasing emphasis on thread-level parallelism, the number of threads per processor and the number of processors per chip."

Rattner says Intel is also doing research on processors and compilers that together optimize program performance in real time. "We are looking at program-visible instrumentation so the compiler has access to [runtime conditions]," he says. "This is on the fly; this is the compiler in the loop."

The technique has improved performance by a factor of two to four, Rattner says. Improvements in basic semiconductor technology will triple microprocessor clock speeds in five years, he predicts. But those clock improvements plus improved exploitation of parallelism by various means will boost total throughput by a factor of six to seven, Rattner says.

Multithreading and chip multiprocessing will be especially important in servers, because they routinely handle workloads — transaction-processing, Web and database applications — that are inherently threaded.

Desktop PCs are more likely to run single-user, single-threaded applications. As a result, the relentless race for higher processing speeds on the desktop may soon be meaningless, says Kevin Krewell, a senior analyst and editor of MicroDesign Resources' "Microprocessor Report" newsletter.

"In servers, more power and scalability are always welcome," he says. "But on the desktop, what do you do with 3 GHz, 4 GHz, 5 GHz? There could be a plateau, when we get the 'good enough' processor." Krewell says designs for desktop processors, and especially notebooks, will increasingly go after other things, such as low power consumption, low mass and quiet operation.

Dies like this one for an Intel Pentium 4 are used to fabricate microprocessors.

In the Silicon Trenches

While the microprocessor vendors work to boost throughput, at another level they toil to find ways to dodge the laws of physics. Current silicon processors have circuit features that are 130 nanometers (nm) wide. Future generations, coming at two-year intervals, will shrink that to 15 nm or so — about as low as you can go in silicon. Getting there won't be easy.

"As we go from 130 nm to 90 nm to 65 nm and then to 42 nm, the standby power dissipation is the single most important problem at the silicon and circuit design level," says IBM's Davari. The leakage of power, which is wasteful and generates heat, increases "dramatically, exponentially," he says.

IBM and other companies are turning to "strained silicon," a technique that boosts performance and lowers power consumption by stretching silicon molecules farther apart, allowing electrons to flow though the transistors up to 70% faster. Chip makers are also experimenting with new materials and methods for making "gates" — which control the electrical flow through a transistor — smaller, faster and more efficient. "These things all started as performance solutions, but now they are solving power problems," Davari says.

Davari says IBM may eventually extend its existing dual-core architecture to hundreds of processors on a chip. It will also integrate dynamic RAM with logic on a single chip, greatly reducing CPU-memory communication delays, increasing throughput and lowering power consumption. And it will move application-specific functions, such as encryption, video compression or speech processing, from software or off-chip hardware to the processor chip, he says.

Dual-core processor chips will bring performance gains, but there may be cost drawbacks, Krewell says. The question is whether software vendors will view a dual-core processor as one or two processors for licensing purposes. "Intel convinced Microsoft that hyperthreading is one processor, although it looks to the software like two processors," he says. "But as you put two cores on there, then four cores, will vendors still consider it one processor?"

PROCESSOR PROGNOSTICATIONS

Read a forecast of how the competition among microprocessor vendors will play out over the next few years.

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SIZE MATTERS

High-end servers today contain 64-bit processors, while desktops and notebooks run 32-bit CPUs, as do many low-end servers. Most servers need, or would at least benefit from, the 4GB-plus memories that a 64-bit address space permits. Vendors disagree on the timing, but it's reasonable to think that desktop PC users will someday also want 4GB of memory.

It will be more than five years before desktop PCs are routinely powered by 64-bit processors, says Justin Rattner, director of microprocessor research at Intel. In the meantime, Intel's 64-bit Itanium line for servers and the 32-bit x86-based processors for desktops and notebooks will move ahead independently.

In contrast, Advanced Micro Devices Inc. says it will move its entire line of microprocessors to 64 bits in 2004. Its new Opteron chip for servers, to be introduced next month, will be able to run both 32- and 64-bit software. Servers with 32-bit processors will be obsolete in a year, and desktop users will want 64 bits in three to five years, "when 4GB of memory will be pretty cheap," says Fred Weber, chief technology officer for computation products at AMD.

The companies' different outlooks on the migration to 64 bits can perhaps be explained by their very different processor architectures. AMD has built instruction-set compatibility between its 32-bit processors and its 64-bit processors. Code can be easily ported from one to the other and will perform well on either, AMD says. IBM and Sun have built a similar compatibility into their 32- and 64-bit processors. Intel chose to go a different route: The 64-bit Itanium line is an entirely new architecture with a different instruction set from the old x86 architecture, which the company now calls IA32. The Itanium performs poorly in 32-bit-emulation mode, analysts say, and code can't be ported from IA32 to Itanium without recompiling and testing.

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Nevertheless, he says, there are advantages to Intel's separate architectures: Banias for mobile, Pentium for desktop PCs, Xeon for workstations and low-end servers, and Itanium for larger servers. Each can be tailored and tuned to meet different objectives. The much-smaller AMD can't afford to do that, Krewell says.

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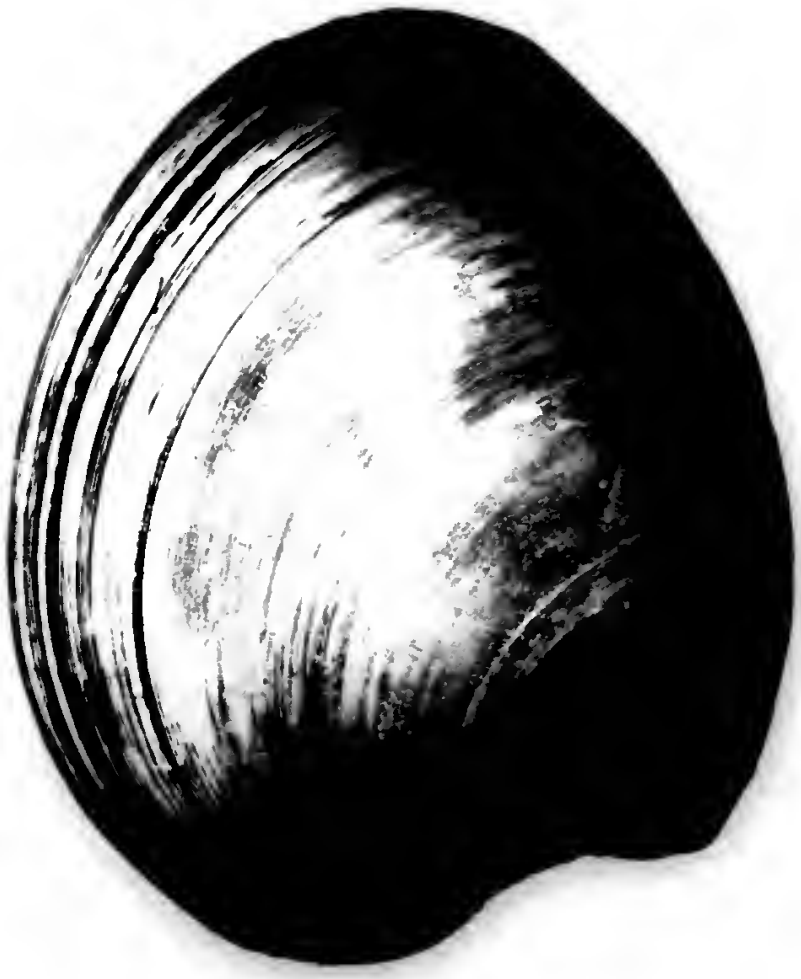

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TRAFFIC

COMPRESSION RELIEVES CONGESTION

WAN traffic-compression devices can free up bandwidth on busy links, eliminating expensive service upgrades. **By Matt Hamblen**

QUAKER CHEMICAL Corp. faced a dilemma. The Conshohocken, Pa.-based company wanted to bring a bandwidth-intensive enterprise resource planning (ERP) system online without making costly upgrades to its frame-relay links between five locations in Europe and the U.S. So Buhba Tyler, vice president and CIO, tried installing wide-area network traffic-compressioo appliances in each location. The devices freed up enough bandwidth to meet the needs of the ERP application. In fact, they performed so well that Tyler is considering reducing the size of the existing connectioos.

Companies with far-flung operations are increasingly turning to traffic compressioo appliances as lower-cost alternatives to upgrading the bandwidth of WAN links. The technology behind these appliances isn't all new, hut corporate IT budget constraints and a return on investment in as short a time as ooe year have made the devices an increasingly attractive option.

Some of the compressioo algorithms used in these appliances have been around for a decade or more and have beeo available as add-oo software or hardware to WAN routers from Cisco Systems Inc. and others. For example, a compressioo card can be added to Cisco's 2600 router for $995 or to its 3660 and 3700 series routers for $2,000.

But with IT focusing on cost savings, several small WAN compressioo appliance veodors have jumped in with plug-and-play products that they claim are more efficient and easier to configure. The vendors claim that their tools improve throughput by a factor of two to 10 and boast higher compressioo rates than compressioo-enabled switches.

Cisco dismisses the claims. "We've seen interest in compression for years but have never seen the market take off," says Kip Sides, manager of product marketing at Cisco. The reason: the "expense of deploying and managing it, and the benefits aren't really that significant," he says. "We could, over time, see a reasonable benefit to oew technologies, but we are skeptical."

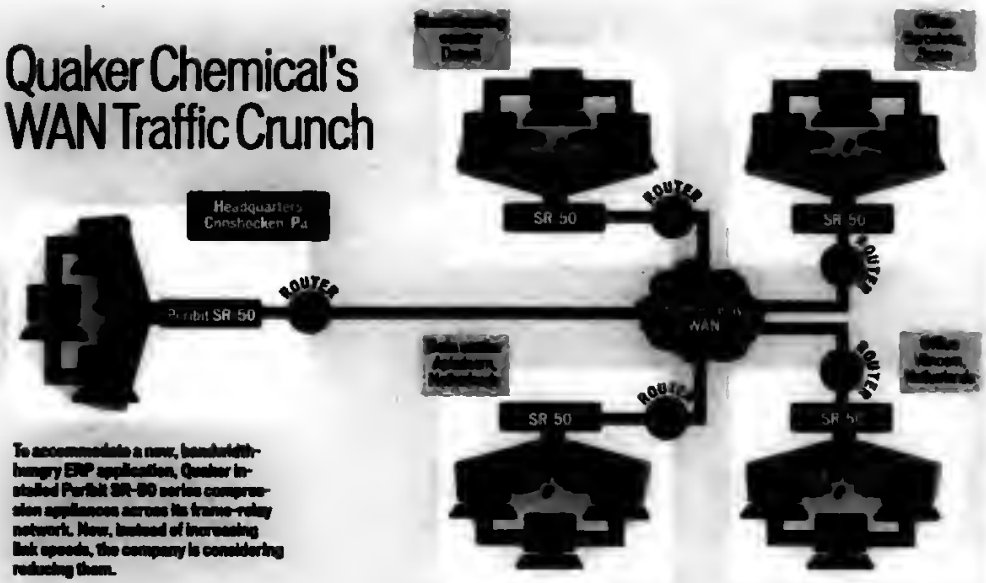
Some users and analysts disagree. Cisco seems focused on providing bigger, more comprehensive networking platforms rather than compressioo add-ons, says Mark Fabbi, an analyst at Gartner Inc. in Stamford, Conn.

Quaker Chemical's Tyler says he didn't want to go through the time and complexity of setting up his Cisco gear for compression, opting instead for appliances from Peribit Networks Inc. in Santa Clara, Calif. "We could spend days or maybe weeks tuning the Cisco switches and have to use other equipmeot to do the analysis, or we could just plug in the [Peribit] SR-50s and be up and running," he says.

The results speak for themselves, says Tyler. "We now estimate we won't have to add any bandwidth for our oogoing growth in the ERP and other applications we have on the drawing board," he says. Instead, Tyler is considering reducing the committed information rate on some frame-relay links, which currently range from 256K to 1.44M bit/sec. The SR-50 appliances sell for $6,000 each, but be says it would have cost him three to five times that amount to increase bandwidth, depending on the link.

GeoLogistics Corp. connected 29 branch offices to its global data center in England using Accelerator 1800 de-

Quaker Chemical's WAN Traffic Crunch



To accommodate a new, bandwidth-hungry ERP application, Quaker installed Peribit SR-50 series compression appliances across its frame-relay network. Now, instead of increasing link speeds, the company is considering reducing them.

vices from Expand Networks Inc. at each site and two Accelerator 4800 boxes at the data center, says international network manager Morey Straus. The Santa Ana, Calif.-based global freight logistics provider began adding the devices from Roseland, N.J.-based Expand in 2001, when bandwidth demands started rising as as result of a move from dumb terminals to PCs and thin clients.

"When I first heard about Expand, my initial reaction was that it was probably just more Cisco compression, which gives you maybe a 15% improvement," says Straus. "But with Expand, we've been getting between three to four and a half times the throughput. It's a world away from Cisco compression." Straus says the system paid for itself in three months. His average cost to double the port speed from 64K to 128K bit/sec. on one link was $8,000. He equipped each site with an Expand appliance for less than $2,000; the two boxes at the data center cost $20,000.

Dreyer Medical Clinic in Aurora, Ill., deployed Accelerator boxes on each end of four 56K bit/sec. point-to-point circuits in northeastern Illinois, says Stephen Hart, network and systems administrator.

"We didn't want to upgrade the lines, since it costs from $600 to $2,300 a month to install a T1," he says. The eight appliances, which have been deployed for about two years, cost $12,000, plus $250 annually per appliance for support, he says. Hart says the boxes paid for themselves in less than one year.

Dreyer has since installed Citrix Systems Inc. thin-client applications, which he says could be a "network bog," but the system has been able to support that, he says. "We get up to nine times the performance increase, and there are no data integrity issues," he notes. Most users have no idea the system is in place, he says. "I never get a call saying the system is running fast today, but it prevents a slowdown."

The Secret Sauce

All the vendors use similar technologies that find common bit or byte patterns, replace them with much shorter markers that refer to the original data and transmit those to the recipient. All appliances expand on older, well-established compression technologies such as Lempel-Ziv-Stac, named after its creators. But that doesn't mean the appliances are standardized — or interoperable. Current offerings require the installation of identical compression appliances on each end of a WAN link, usually inside the corporate firewall, to avoid security problems.

Expand uses at least two different compression algorithms. Its appliances sort headers by type of traffic, such as file transfer protocol, and remove redundant information common to each traffic type. They then use a bit pattern-recognition algorithm that determines data stream patterns and caches those on both sides of the WAN.

Peribit has patented a technique it calls Molecular Sequence Reduction (MSR) that's based on pattern-recognition algorithms previously used to study DNA, says Amit Singh, Peribit's co-founder and chief scientist. He claims that MSR holds tens to hundreds of megabytes of patterns, while other devices examine only a 2KB window of data before moving to the next window. MSR also has a built-in "adaptive dictionary" of patterns that puts greater value on the most frequent and largest patterns seen in data streams.

Peribit makes the highest performance claims, but analysts are dubious about the company's claims of technological superiority. "Peribit has made lots of noise about its DNA connection, but its technology is not significantly different than Expand's, [and] Expand has been more successful with customers," says Thomas Mendel, an analyst at Giga Information Group Inc. in Cambridge, Mass. Expand's aggressive pricing may help explain that. Peribit responded in January with the introduction of a new low-end model, the $2,900 SR-20.

WAN traffic appliances remain a niche market dominated by small players. Peribit has been shipping products for just 15 months and boasts 100 customers worldwide, and Expand claims to have more than 500 customers.

Both vendors and analysts expect more users to turn to these devices, but they differ in growth estimates. Jef Graham, president and CEO of Peribit, expects WAN traffic-compression sales to shoot to $5 billion in coming years. "That's overstated by a magnitude of 10 or more," counters Fabbi. Mendel puts that market, which is mainly held by Peribit and Expand, at about $20 million, and he says it will expand to $50 million in mid-2004.

But Mendel also warns that the vendor landscape could completely change in the next two years. He expects the market for stand-alone compression appliances to last perhaps another two years before the functions are absorbed into the next generation of routers offered by Cisco and others. That means an IT manager should deploy only if he expects an ROI in a year or less. "If you can't calculate an ROI of 12 months or less, don't do it," he says.

COMPRESSION DECISION

Quaker's Bubba Tyler discusses the pros and cons.

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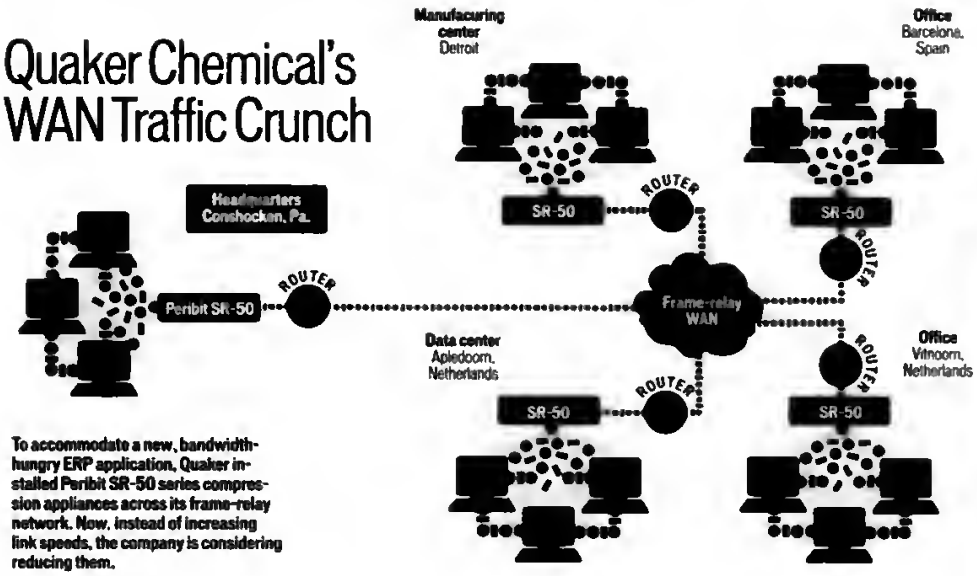
Compression Appliance Offerings

Quaker Chemical's WAN Traffic Crunch



To accommodate a new, bandwidth-hungry ERP application, Quaker installed Peribit SR-50 series compression appliances across its frame-relay network. Now, instead of increasing link speeds, the company is considering reducing them.

vices from Expand Networks Inc. at each site and two Accelerator 4800 boxes at the data center, says international network manager Morey Straus. The Santa Ana, Calif.-based global freight logistics provider began adding the devices from Roseland, N.J.-based Expand in 2001, when bandwidth demands started rising as as result of a move from dumb terminals to PCs and thin clients.

"When I first heard about Expand, my initial reaction was that it was probably just more Cisco compression, which gives you maybe a 15% improvement," says Straus. "But with Expand, we've been getting between three to four and a half times the throughput. It's a world away from Cisco compression." Straus says the system paid for itself in three months. His average cost to double the port speed from 64K to 128K bit/sec. on one link was $8,000. He equipped each site with an Expand appliance for less than $2,000; the two boxes at the data center cost $20,000.

Dreyer Medical Clinic in Aurora, Ill., deployed Accelerator boxes on each end of four 56K bit/sec. point-to-point circuits in northeastern Illinois, says Stephen Hart, network and systems administrator.

"We didn't want to upgrade the lines, since it costs from $600 to $2,300 a month to install a T1," he says. The eight appliances, which have been deployed for about two years, cost $12,000, plus $250 annually per appliance for support, he says. Hart says the boxes paid for themselves in less than one year.

Dreyer has since installed Citrix Systems Inc. thin-client applications, which he says could be a "network hog," but the system has been able to support that, he says. "We get up to nine times the performance increase, and there are no data integrity issues," he notes. Most users have no idea the system is in place, he says. "I never get a call saying the system is running fast today, but it prevents a slowdown."

The Secret Sauce

All the vendors use similar technologies that find common bit or byte patterns, replace them with much shorter markers that refer to the original data and transmit those to the recipient. All appliances expand on older, well-established compression technologies such as Lempel-Ziv-Stac, named after its creators. But that doesn't mean the appliances are standardized — or interoperable. Current offerings require the installation of identical compression appliances on each end of a WAN link, usually inside the corporate firewall, to avoid security problems.

Expand uses at least two different compression algorithms. Its appliances sort headers by type of traffic, such as file transfer protocol, and remove redundant information common to each traffic type. They then use a bit pattern-recognition algorithm that determines data stream patterns and caches those on both sides of the WAN.

Peribit has patented a technique it calls Molecular Sequence Reduction (MSR) that's based on pattern-recognition algorithms previously used to study DNA, says Amit Singh, Peribit's co-founder and chief scientist. He claims that MSR holds tens to hundreds of megabytes of patterns, while other devices examine only a 2KB window of data before moving to the next window. MSR also has a built-in "adaptive dictionary" of patterns that puts greater value on the most frequent and largest patterns seen in data streams.

Peribit makes the highest performance claims, but analysts are dubious about the company's claims of technological superiority. "Peribit has made lots of noise about its DNA connection, but its technology is not significantly different than Expand's, [and] Expand has been more successful with customers," says Thomas Mendel, an analyst at Giga Information Group Inc. in Cambridge, Mass. Expand's aggressive pricing may help explain that. Peribit responded in January with the introduction of a new low-end model, the $2,900 SR-20.

WAN traffic appliances remain a niche market dominated by small players. Peribit has been shipping products for just 15 months and boasts 100 customers worldwide, and Expand claims to have more than 500 customers.

Both vendors and analysts expect more users to turn to these devices, but they differ in growth estimates. Jef Graham, president and CEO of Peribit, expects WAN traffic-compression sales to shoot to $5 billion in coming years. "That's overstated by a magnitude of 10 or more," counters Fabbi. Mendel puts that market, which is mainly held by Peribit and Expand, at about $20 million, and he says it will expand to $50 million in mid-2004.

But Mendel also warns that the vendor landscape could completely change in the next two years. He expects the market for stand-alone compression appliances to last perhaps another two years before the functions are absorbed into the next generation of routers offered by Cisco and others. That means an IT manager should deploy only if he expects an ROI in a year or less. "If you can't calculate an ROI of 12 months or less, don't do it," he says.

COMPRESSION DECISION

Quaker's Bubba Tyler discusses the pros and cons

QuickLink 36461
www.computerworld.com

When Bad Things Happen to Good Demos

A slick security product demonstration only serves to prove that vendors often don't think enough about what security managers need. By Vince Tuesday

SECURITY MANAGER'S JOURNAL

"HOW MUCH MONEY do you have in your budget? You have to be aware that this is very expensive software."

Ah, the ont-so-sweet sound of the sales pitch.

Much of my work as a security manager is like that of a juggler, always keeping balls in the air. My daily goal is to deal with the next falling ball, be it a virus attack, a new e-commerce project or some suspected abuse.

This week, however, I was able to lift my gaze for a few days to think about future needs and meet with vendors. And once again, a slick product demonstration showed all too clearly one vendor's fundamental inability to understand our needs.

Two Challenges

We are meeting with vendors to address two challenges. First, we need to better manage the volume of security data we gather. Our antivirus applications, vulnerability data, intrusion-detection systems, firewalls, routers, operating systems and everything else we touch produce valuable security data, but in different formats.

It's expensive to train our staff to understand this modern-day Tower of Babel, and it takes up costly extra time when we must deal with incidents. If we could automatically translate and link security events, we would reduce costs and further improve our defenses.

The second challenge is to step up monitoring beyond our signature-based approach to detect unusual or anomalous behavior that doesn't match a known signature. Given that the SQL Slammer worm is reported to have taken less than 10 minutes to infect every vulnerable system on the planet, it's clear that waiting for an update from a vendor isn't going to work on its own.

Pulling together diverse security information is a common problem, and many vendors have products to address it, including the vendor whose salesman finished up his session with that pitch I quoted in the beginning of this article. I looked into this area a few years ago, and the products were very immature. I was hoping that the latest versions would have something interesting to offer.

We invited several vendors to demonstrate how their software could save us time, effort and cost.

> **The product ran and worked, which in some ways was the curse of their presentation. If they had stuck with PowerPoint screenshots, we wouldn't have seen what made the whole thing useless to us.**

The vendor I mentioned previously certainly put on a good show. Its salespeople arrived with an entire network in a suitcase and proceeded to unpack and set up servers, clients and a hub. The product ran and worked, which in some ways was the curse of their presentation. If they had stuck with PowerPoint screenshots, we wouldn't have seen what made the whole thing useless to us.

Poor Display

The tool pulled in an enormous range of data, stored it in a database, correlated root causes and generated alerts on them. It sounded good.

However, the front-end software had an awful graphical user interface. It was clunky and slow — an unpleasant thing to force on my analysts, who would use it day in and day out.

The procedure that addressed the detection of correlated events was particularly bad. A window popped up that displayed an identification. But when I'm presented with an alert indicating that a whole series of linked things has happened, I want to see the details of all the underlying events and the reasoning used to link them, so I can understand how to respond. The sales team understood this, so they had cut and pasted the ID into a SQL report and run a report against the database.

But the whole point of this application was to reduce my team's manual work. Why couldn't we just click? Apparently, we could add our own scripts to take the action we wanted when an ID was raised.

But isn't the point of buying software to get something that does the work for me? If I wanted a framework, I'd just send all the money I have to BMC or Tivoli.

Then came the deal-killer. If you wanted to see whether new events had occurred within that correlation, the tool couldn't tell you. Instead, you had to rerun the report. So you might get an ID for a few innocuous linked events and discount it, and unless you continually reran the report to check, a bunch of horrible events could be added under your nose. My team has enough problems keeping up with the raw data without adding another layer of work.

Not to worry, though. Apparently, these "minor" issues will be resolved in the next version. If a product saves me a lot of money, then I'll pay a lot for it. It's simple, really. In this case, I don't have to worry how expensive this tool might be, since I won't be buying it.

It looks like I won't be saving money by automating our processes just yet. I'm sure some managed-service providers have ways to do this well. But since that's the core of their business, I doubt they'll sell it to me on a CD.

Perhaps the new generation of anomaly-detection software will have something worth emptying my budget into. But I had best be off to meet with more vendors before all those balls I'm juggling start coming back down.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Vince Tuesday," whose name and employer have been disguised for obvious reasons. Contact him at vince.tuesday@hushmail.com, or join the discussion in our forum:

QuickLink a1590

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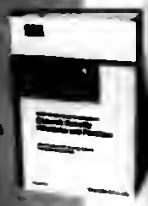
SECURITY LOG

Security Bookshelf



Network Security Principles and Practices, by Saadat Malik, Cisco Press, 2002

This 770-page tome is a detailed technical guide to protecting and managing large networks. It covers protecting Cisco Systems Inc. devices and managing and configuring firewalls, virtual private networks and intrusion-detection systems. It also discusses how large networks and Internet service providers can protect against distributed denial-of-service attacks. I found the guide to troubleshooting information particularly useful.

The book covers only Cisco products, but much of the guidance is applicable to other companies' wares. It's a must-read if you're considering taking security-related Cisco Certified Internetworking exams. I would also recommend it to anyone involved in the technical details of protecting large networks.

– Vince Tuesday

SSHSecure Does Desktops

Lattix Networks Inc. in Superior, Colo., has released Version 2.0 of its SSHSecure Vulnerability and Assessment Management suite, which includes a new desktop module and helps enterprises track and manage vulnerabilities on Windows and Macintosh systems. Annual pricing starts at $500.

New Tool Blocks Worm Traffic

Wisen Software Inc. announced Constellation, a tool that monitors and blocks network traffic associated with worms. Instead of relying on worm signatures, the product detects and blocks suspicious traffic patterns at the network layer, according to the Boston, Gold-based vendor. Counter-Technologies for the small operating pricing starts at $500,000.

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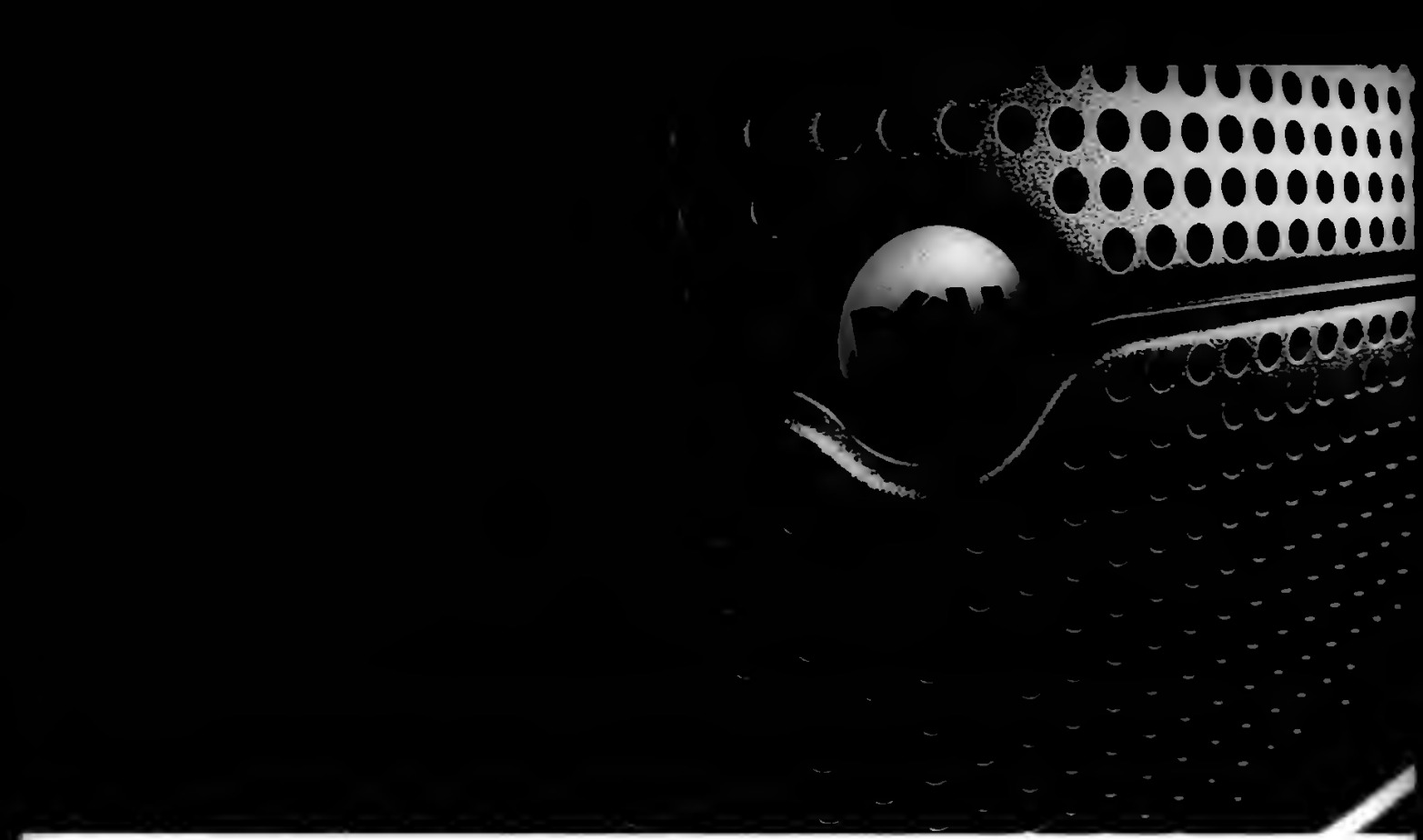

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Presence Technology

DEFINITION

Presence technology allows a network user to know when another user is connected to the network and thus available to receive and immediately answer a communication. Instant messaging, pioneered by America Online, is the first and best-known example of a presence technology.

BY RUSSELL KAY

IN TODAY'S INFORMATION economy, digital technologies let us easily communicate with colleagues and customers around the world. E-mail has given us an asynchronous communications medium that helps free us from the strictures of time-zone differences. We can send a message at any time and get a reply at the other person's convenience.

But there can be times wheo we may need a quick answer from, say, any of a dozen people, and it takes a while just to find one of that dozen who is available.

QUICK STUDY

With the growing use of instant messaging (IM) technology, such as America Online Inc.'s AOL Instant Messenger (AIM) and Microsoft Corp.'s Messenger services, we now have a better alternative.

If we have those dozeo people oo our "buddy list," we can tell at a glance if any of their computers are logged onto the network and whether they've been active recently. We can tell if Judy in engineering is open to communications, and we can send ber a quick IM to ask a question. Her reply by IM or phone can resolve the problem efficiently.

Although AIM started as a consumer-grade technology, it was quickly adopted by many businesses that saw its advantages in enabling quick communications and providing presence information.

The rapid growth in its use brought competition, notably from Microsoft and Yahon Inc., which made their own products that interoperated with the AIM servers. However, AOL sooo managed to sbut them out, and the result for the past several years has been a plurality of competing networks of IM products that can't talk to one another.

Compatibility? Interoperability? Standards? Not yet, but there's hope for the near future (see box below). One potential complicatioo is that in September 2002, AOL received a U.S. patent on IM technology. To date, AOL has given no indication that it intends to charge its competitors with infringement.

A Wider Presence

The traditional model of IM is widening rapidly as more people carry handheld wireless devices and as cellular telephones perform more functions.

LM Ericsson Telepbone Co., Motorola Inc. and Nokia Corp. formed the Wireless Village Initiative to build presence technology into their mobile-phone services (also called m-presence capability). Officially known as the Instant Messaging and Preseoce Services Solution (IMPS), this should let users know if the people they're trying to contact are available, even before they pick up the pbone. You'll only have to push a few buttons to see if the other persoo's phone is turned on and if that person is on the phone, in a meeting or even at lunch.

There's even discussion of using Global Positioning System technology in future versions of m-presence to let you know where a person is even before you make the pbone call. This is similar to recent moves to incorporate location data into cell phone transmissions for law enforcement and public safety purposes.

Once that capability is in place, extending it to other devices and other inquiries is a potential next step. But before that can happen, we need more and better interoperability among messaging networks. ■

Kay is a Computerworld contributing writer in Worcester, Mass. You may contact him at russkay@charter.net.

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Standardizing IM and Presence

THOUGH MANY INTERNET standards make IM and presence technology possible, there aren't yet any definitive standards across the industry. However, the incompatibility of current IM products, which has resulted in three major silos of users, may be coming to an end.

The Internet Engineering Task Force's (IETF) recently approved a new working group to focus on the Extensible Messaging and Presence Protocol (XMPP).

According to the group's charter (on the Web at *www.ietf.org/html.charters/xmpp-charter.html*), "XMPP is an open, XML-based protocol for near real-time extensible messaging and presence. It's the core protocol of [Denver-based Jabber Inc.'s] Jabber Instant Messaging and Presence technology, which is currently deployed on thousands of servers across the Internet and is used by millions of people worldwide."

Session Initiation Protocol (SIP), a signaling standard for setting up and managing communications sessions between different media, is one of two key protocols for presence technology [QuickLink 35318].

The other important protocol is SIP for Instant Messaging and Presence Leveraging Extensions, which isn't yet an IETF standard but still serves as a uniform way to add presence.

– Russell Kay

Getting the Messaging

PUBLIC SERVICES: These include AOL Instant Messenger, MSN Messenger and Yahoo Messenger. These products:

- Are available to everybody.
- Are often free.
- Use a centralized, third-party server to relay messages.

PRIVATE SERVICES: These three providers of public IM systems also have enterprise versions designed for corporate use: AOL Enterprise AIM, Yahoo Messenger Enterprise Edition and Microsoft Messenger Connect for Enterprises. These products offer:

- Secure IM
- Message logging
- Enterprise-class service
- Corporate control of messaging servers and policies

COLLABORATION TOOLS: These collaboration systems include presence technology:

- IBM Lotus Sametime software
- Groove Networks Inc.'s Groove Workspace
- Microsoft's Windows Server 2003

PRESENCE TECHNOLOGY PRODUCT VENDORS:

- **Bantu Inc.**
  Washington
  www.bantu.com
- **Comverse Inc.**
  Wakefield, Mass.
  www.comverse.com
- **Dynamicsoft Inc.**
  East Hanover, N.J.
  www.dynamicsoft.com
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  www.notepage.com
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  Alexandria, Va.
  www.presenceworks.com
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  Mountain View, Calif.
  www.vayusphere.com

BRIEFS

SCO Group Ships OpenServer 5.0.7

The SCO Group Inc. has released Version 5.0.7 of its OpenServer Unix operating system, with enhanced hardware support, integrated open-source tools and a new SCO Update Service. It's available in Enterprise, Host and Desktop versions and includes Universal Serial Bus 2.0 integration and new driver support. It supports Intel Corp.'s Pentium 4 and Xeon chips, as well as Athlon XP and MP chips from Advanced Micro Devices Inc. Lindon, Utah-based SCO has priced the operating system starting at $699.

Datastick Rolls Out Bluetooth Software

Datastick Systems Inc. in Santa Clara, Calif., last week announced new software that will use Bluetooth wireless technology to connect manufacturing-floor sensors to Palm Inc. handhelds. The software, Datastick Connection Plus BT for ICHM, runs on Palm's Tungsten T and m500 series handhelds with Palm's Bluetooth card. The software is available on a Bluetooth-enabled manufacturing-floor sensor from Oceana Sensor Technologies Inc. in Virginia Beach, Va. Pricing wasn't disclosed.

Vendors Bring Office to Linux

Tarantella Inc. and CodeWeavers Inc. are partnering to offer secure Web access to Microsoft Office and other Windows applications hosted on Linux servers. St. Paul, Minn.-based CodeWeavers will offer a new Internet-optimized version of CodeWeavers CrossOver Office Server Edition, which allows Linux to run Windows applications in a distributed thin-client environment. The software will be available next month as part of Tarantella's Enterprise 3. Pricing starts at $2,380 for 25 users from CodeWeavers and $150 per user from Santa Cruz, Calif.-based Tarantella.

NICHOLAS PETRELEY

And Here's The Pitch

"WELCOME, FOLKS, to the first game of the software World Series, with Microsoft going up against the Customer. I'm Harv Coney, doing the play-by-play with my co-host, Hank Kee.

"Bill Gates is the lead-off hitter for Microsoft, with Jean Paoli on deck. Bill will be facing right-hander Mark Kett tonight. Mark is famous for his Linux-ball, which has given Gates trouble all season. What do you think Bill's going to do tonight, Hank?"

"It's hard to say, Harv. Bill is a good switch-hitter. Remember back in 1996 when Microsoft played Unix Expo in New York? He got an infield single by saying Windows NT was basically the same thing as Unix. But he's almost sure to go for a Unix slam tonight."

"Here comes the first pitch. And it's a Linux-ball, high and inside. Bill swings and misses with a comment about how hard it was for Microsoft to compete when IBM put all its resources behind OS/2!"

"Wow, I don't think anyone saw that coming, Harv. Everyone knows our bat-boy supported OS/2 more than IBM did."

"Good point, Hank. Now here's the windup. And the pitch. Bill swings and misses with the 'too many incompatible versions of Linux' comment. That's Strike 2. Kett fidgets on the mound. And here's the windup for the 0-2 pitch. He fires another Linux-ball, this time straight down the middle! Bill hits the ball down the left-field line with the comment that 'Linux is like Unix, which is like building a 747 by committee.'

"Left fielder Reggie Stir gets a bead on the ball and catches it easily with the old joke about how Windows is like an attractive plane that explodes in midair without warning. One out; and that brings up Jean Paoli."

"Harv, Jean's had a pretty good batting average against the press with XML this year, but his overall average is low, especially against pennant contenders."

"Here's the first pitch to Paoli. It's a Linux-ball low and outside for Ball 1. Kett works quickly; he winds and deals. It's an OpenOffice change-up. Paoli swings with Office 11 and hits it right to the shortstop, Sunny Micro — who boots the ball! Paoli rounds first base as Sunny finds the handle and throws it to Dot Org at second. Now the runner's hung up between first and second! He's got nowhere to go, and Dot runs him down and tags him for the second out."

"I suspected Jean might get himself into a pickle. If he's lying about opening up the Office document format, there'll be a backlash from customers. If he really opens up the document format, the free OpenOffice will import those documents and draw away customers."

"That's right, Hank. Well, it's up to the next batter, Pat Ent, to give Microsoft a little life this inning. Wait, it looks like Microsoft is sending in Dee R. Emm to pinch-hit for Pat. Dee spends most of her free time promoting digital rights."

"Right now she has to worry about Kett's privacy-ball, Harv. She's been batting under .100 against that pitch all season. But she's had her scouts out researching everything they can find out about Mark Kett and his pitching strategy, and I hear she has a pretty detailed database on Mark — including what he does in his personal life."

"Here comes the first pitch. It's a Media Player-ball low and inside. Emm hits it with a list of all the DVDs Kett has watched over the past six months, but it's out of reach in foul territory. Kett's into his windup; he delivers — and it's way out of the strike zone. Wow, that was almost a wild pitch, Hank. Dee seems to have unnerved him with that last swing."

"Maybe she hasn't listed *all* of the DVDs."

"Good point, Hank. Now Mark comes back with the privacy pitch. Dee hits it deep into center field! Going, going — gone! And it's 1-0 Microsoft, in the top of the first!"

"Well, Harv, it looks like there's plenty of excitement ahead. We'll be right back after this word from our sponsor, Microsoft."

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Datastick Systems Inc. in Santa Clara, Calif., last week announced new software that will use Bluetooth wireless technology to connect manufacturing-floor sensors to Palm Inc. handhelds. The software, Datastick Connection Plus BT for ICHM, runs on Palm's Tungsten T and m500 series handhelds with Palm's Bluetooth card. The software is available on a Bluetooth-enabled manufacturing-floor sensor from Oceana Sensor Technologies Inc. in Virginia Beach, Va. Pricing wasn't disclosed.

Vendors Bring Office to Linux

Tarantella Inc. and CodeWeavers Inc. are partnering to offer secure Web access to Microsoft Office and other Windows applications hosted on Linux servers. St. Paul, Minn.-based CodeWeavers will offer a new Internet-optimized version of CodeWeavers CrossOver Office Server Edition, which allows Linux to run Windows applications in a distributed thin-client environment. The software will be available next month as part of Tarantella's Enterprise 3. Pricing starts at $2,380 for 25 users from CodeWeavers and $150 per user from Santa Cruz, Calif.-based Tarantella.

NICHOLAS PETRELEY

And Here's The Pitch

"WELCOME, FOLKS, to the first game of the software World Series, with Microsoft going up against the Customer. I'm Harv Coney, doing the play-by-play with my co-host, Hank Kee.

"Bill Gates is the lead-off hitter for Microsoft, with Jean Paoli on deck. Bill will be facing right-hander Mark Kett tonight. Mark is famous for his Linux-ball, which has given Gates trouble all season. What do you think Bill's going to do tonight, Hank?"

"It's hard to say, Harv. Bill is a good switch-hitter. Remember back in 1996 when Microsoft played Unix Expo in New York? He got an infield single by saying Windows NT was basically the same thing as Unix. But he's almost sure to go for a Unix slam tonight."

"Here comes the first pitch. And it's a Linux-ball, high and inside. Bill swings and misses with a comment about how hard it was for Microsoft to compete when IBM put all its resources behind OS/2!"

"Wow, I don't think anyone saw that coming, Harv. Everyone knows our batboy supported OS/2 more than IBM did."

"Good point, Hank. Now here's the windup. And the pitch. Bill swings and misses with the 'too many incompatible versions of Linux' comment. That's Strike 2. Kett fidgets on the mound. And here's the windup for the 0-2 pitch. He fires another Linux-ball, this time straight down the middle! Bill hits the ball down the left-field line with the comment that 'Linux is like Unix, which is like building a 747 by committee.'

"Left fielder Reggie Stir gets a bead on the ball and catches it easily with the old joke about how Windows is like an attractive plane that explodes in midair without warning. One out; and that brings up Jean Paoli."

"Harv, Jean's had a pretty good batting average against the press with XML this year, but his overall average is low, especially against pennant contenders."

"Here's the first pitch to Paoli. It's a Linux-ball low and outside for Ball 1. Kett works quickly; he winds and deals. It's an OpenOffice change-up. Paoli swings with Office 11 and hits it right to the shortstop, Sunny Micro — who boots the ball! Pauli rounds first base as Sunny finds the handle and throws it tu Dot Org at second. Now the runner's hung up between first and second! He's got nowhere to go, and Dot runs him down and tags him for the second uut."

"I suspected Jean might get himself into a pickle. If he's lying about opening up the Office document format, there'll be a backlash from customers. If he really opens up the document format, the free OpenOffice will import those documents and draw away customers."

"That's right, Hank. Well, it's up to the next batter, Pat Fnt, to give Microsoft a little life this inning. Wait, it looks like Microsoft is sending in Dee R. Emm to pinch-hit for Pat. Dee spends most of her free time promoting digital rights."

"Right now she has to worry about Kett's privacy-ball, Harv. She's been batting under .100 against that pitch all season. But she's had her scouts out researching everything they can find out about Mark Kett and his pitching strategy, and I hear she has a pretty detailed database on Mark — including what he does in his personal life."

"Here comes the first pitch. It's a Media Player-ball low and inside. Emm hits it with a list of all the DVDs Kett has watched over the past six months, but it's out uf reach in foul territory. Kett's into his windup; he delivers — and it's way out of the strike zone. Wow, that was almost a wild pitch, Hank. Dee seems to have unnerved him with that last swing."

"Maybe she hasn't listed *all* of the DVDs."

"Good point, Hank. Now Mark comes back with the privacy pitch. Dee hits it deep intn center field! Going, going — gone! And it's 1-0 Microsoft, in the top of the first!"

"Well, Harv, it looks like there's plenty of excitement ahead. We'll be right back after this word from our sponsor, Microsoft." ●

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All or Nothing
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Look Before You Leap to Outsource
Do your homework before signing on the dotted line, advises columnist Bart Perkins. **Page 46**

Breaking Outsourcing Boundaries

Forget following the conventional rules. Focus on the idiosyncrasies of your business.

By Kathleen Melymuka

OUTSOURCING IS OFTEN A DIRTY WORD among the IT ranks, but CIO George Lin has used it to boost morale at Documentum Inc., a maker of enterprise content management software in Pleasanton, Calif.

When most companies outsource, Lin says, they "keep the core and outsource the context." But Lin gives employee satisfaction equal weight in the outsourcing decision. That has prompted him to keep in-house some areas that many would consider "context" and outsource some that are "core."

WATCH

"If everybody else is outsourcing something, maybe you should too, but it really depends from company to company," says Lin, whose unconventional approach has made his IT group a model for out-of-the-box thinking at the company.

Lin isn't alone. Iconoclastic IT leaders are learning that when it comes to outsourcing, thinking about the idiosyncrasies of your business is much more important than following the rules. For example, the IT help desk is often the first thing to go because it plays a supporting role that's not seen as adding value. But an early attempt at outsourcing taught Lin that the help desk is the business's window to IT.

"No matter how good your back-end operation is, it's only as good as it's perceived at the help desk," Lin explains. "So if you outsource that without thinking it through, you can create an internal perception that customers are not getting the best service."

Lin's philosophy also led him to outsource Documentum's worldwide network, a core technology for the company, which is dispersed geographically. Senior network engineer Stan Wolf was spending too much of his time manually rerouting traffic among company sites when the Internet or frame-relay network connections failed.

"He was pulling his hair out trying to keep the network working," Lin recalls. And because the company was growing rapidly, the addition of more sites would soon make things worse.

Lin outsourced networking responsibility to Virtela Communications Inc. in Greenwood Village, Colo., which provides and manages a virtual private network across 39 Documentum locations. Each site now has a single primary connection for Internet and wide-area network (WAN) access and a fallback Digital Subscriber Line service in case of failure.

Virtela manages everything, including the last-mile connection and the various intricacies of each site.

The virtual private network has increased bandwidth at the sites by 25% to 100%, decreased latency by 10% and cut WAN costs by half. But most important, Lin says, "we gave the network guy back his sanity. Now, instead of worrying about lights and switches, he's really leveraging his skill set to help the business."

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All in the Family

Early in 1998, Y2k preparations and other large initiatives were straining human resources at Allstate Insurance Co. in Northbrook, Ill. Nearly 50% of the IT workers were contractors. "It was extremely expensive and getting more and more difficult to manage," says Mike Scardina, assistant vice president for finance. Contractor turnover was also a problem. "People would walk out the door with two to four years of Allstate knowledge," he says. Allstate had to find a way to keep its intellectual capital and lower costs.

The solution was to bring outsourcing in-house. Allstate's parent company, The Allstate Corp., developed its own offshore outsourcing operation, Northbrook Technology of Northern Ireland Ltd. in Belfast. "We went to Belfast and found the cost structure, language accessibility, culture and time zone all extremely advantageous," says Scardina.

Initially, Northbrook performed maintenance and low-contact development work that didn't require much interaction with the U.S. group. But in its third year, the group is dealing more directly with users in the U.S., maintaining or developing more than 60 Allstate systems, including Unix administration, security, financial and infrastructure applications, and technology for agents, call centers, underwriters and claims. Costs have been reduced by more than half.

Northbrook also has been a source of skills in newer technologies that are harder to find in the U.S. marketplace, such as speech recognition. "It's a great resource for us," says Chief Technology Officer Cathy Brune. "And we don't have to think twice about the contract or developing a whole new relationship, because the people are employees of the parent corporation."

The six-hour time difference gives Brune additional flexibility for shift work, but it also allows real-time communication during the day.

"It's pretty clever," says Giga's Giera. "I think you're going to see this continue as a trend. Just as companies moved manufacturing offshore because it's cheaper to make sneakers in China, programming and IT can be another business process to move offshore."

But it's not for everybody, she adds, citing a large bank in New York that created a subsidiary in India that failed because business units resisted sending work out. "The key is to have executive support, enough work to support it and an incentive for the business units to use the offshore facility," she says. "Otherwise, it won't succeed."

It's also important to treat such outsourcing arrangements as business — not family — relationships, says Stuart Kliman, a director at Vantage Partners LLC, a consulting firm in Boston that specializes in helping companies institutionalize their relationship management capabilities. "You shouldn't assume just because you own [the outsourcing unit that] you will work effectively with them," he says. "I would attend to the core organizational working relationships with as much if not more discipline than I would with a traditional provider."

Northbrook is handling all of Allstate's outsourcing, and the demand for its services continues to grow as business units look to cut costs. The Northbrook staff has grown to more than 700, with 2003 revenue in excess of $30 million, and Allstate's U.S. IT staff has grown as well, Brune says.

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CATHY BRUNE

Bring outsourcing back in-house to retain talent and lower costs by creating an offshore outsourcing entity. Northbrook Technology of Northern Ireland Ltd.

Costs have been reduced by more than half, and Northbrook is a source of skills in newer technologies that are harder to find in the U.S.

Such projects need executive support, adequate demand for IT services and an incentive for the business units to use an offshore facility.

The Hybrid Approach

In a financial services company like Coast Capital Savings in Vancouver, British Columbia, the technology for the banking operation is about as core as you can get, but Coast Capital outsources it — sort of.

CIO Joel J. Rosenberg uses Sanchez Computer Associates Inc. in Malvern, Pa., an outsourcer that develops and maintains core banking technology for financial institutions throughout the world. But his internal IT employees have access to the Sanchez source code, enabling them to connect the core system to custom applications such as data warehouses, ATMs and debit card systems. "We'll leverage the vendor's expertise and skills as we see fit in terms of business needs," says Dave Smart, manager of business solutions. "Because we have the source code, we're able to meet business needs with in-house resources."

"They focus on improving the technology platform," Rosenberg says. "Our internal IT people focus on issues closer to the customer." For example, the IT group is currently integrating the core system with a new customer relationship management system from Talisma Corp. in Kirkland, Wash. "Banking data and information will be flowing in real time," says Rosenberg. "It requires real-time linkage, so our folks are working on that."

"We understand the business requirements and do business programming," Smart says. "We don't do low-level programming. We don't support the database. That's a skill set we're not interested in."

Giera says leveraging in-house skills is a good way to do more with less. "That's where companies get the most value out of their programming staff, because they know not only the technology but also the business," she says.

JOEL J. ROSENBERG

The hybrid outsourced staffing arrangement was chosen following a merger with a firm that had already been planning to convert to a new system.

An 80% savings over projected costs

Managing the processes that enable in-house folks to work with outsourcers is key to preventing negative perceptions and establishing trust.

It's also economical. After a recent merger with a financial institution that was planning to convert to a new system, the new partner was drawn into the hybrid arrangement, partly because it was expected to deliver 80% savings over projected costs.

Kliman applauds the practicality of hybrid outsourcing, but he notes that this type of relationship brings challenges. "Companies in this situation should really pay attention to the processes they put in place to enable their in-house folks to work effectively with the outsourcers," he says. "If they don't manage that well, negative perceptions and trust problems could lessen the value."

Keeping your priorities straight is the key to successful outsourcing, says Documentum's Lin. "Outsourcing should improve the agility of the business and the agility of the IT organization and make it more effective," he says. "When it's done right, outsourcing is a win for everybody. If you realize cost savings, that's a bonus."

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Continued from page 39

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All or Nothing

GM and Bank One take opposite approaches to outsourcing. By Thomas Hoffman

DANIEL LEVIN

INSOURCING VS. OUTSOURCING. It's the great debate these days for many IT executives who are struggling to cost-justify the most effective way to run their IT operations.

But experts say it's not a question of right or wrong, but of which strategy best fits a company's business model.

General Motors Corp. and Bank One Corp. answered the question by taking divergent paths. Along with the business rationales behind their strategic choices, the CIOs at the two companies offer up some of the tough lessons they have learned along their separate ways.

WATCH

GM's Third Wave

For many people in the IT industry, GM has become synonymous with outsourcing. The $186.6 billion auto giant purchased Electronic Data Systems Corp. in 1984 from Ross Perot and outsourced virtually all of its IT operations to the Plano, Texas-based IT services provider under a precedent-setting 10-year, $40 billion agreement.

In 1996, GM spun off EDS to operate as a stand-alone company and began redistributing some of GM's IT work to other services firms such as IBM, Cap Gemini Ernst & Young and Accenture Ltd. During its 12-year exclusive arrangement with EDS, GM encountered its share of problems in the relationship, but the automaker's commitment to an outsourced model remains fervent.

"If you don't put a model in that works, it makes it look like outsourcing doesn't work," says Ralph Szygenda, GM's CIO since June 1996. He insists that most companies that switch from an outsourced to an in-house approach "typically don't have the right model in place to manage outsourcing." As a result, they mistakenly end up blaming outsourcing as a discipline.

Szygenda acknowledges that "GM had done things wrong in outsourcing its work, but we changed the model; we didn't go back and insource." Early outsourcing mistakes that GM later corrected include contracting a single source for services and farming out management and IT architecture responsibilities to a third party.

Today, in what he calls the company's third wave of outsourcing, Szygenda and his team of 1,700 IT employees manage GM's outsourcing relationships with a multitude of vendors, including all of the major outsourcing companies. The GM IT group also oversees the various vendors' relationships and alignment with GM's eight global operating groups and major subsidiaries, including GMAC Financial Services, Hughes Electronics Corp. and GM Locomotive Group.

During the first wave of outsourcing, by contrast, GM handed all of its IT activities over to EDS. "Pricing was too high because there wasn't any competition," says Szygenda.

Even if a single outsourcer has the best intentions to get the job done, there's no incentive for it to complete tasks within budget and scope, because there's no threat of it being replaced, he notes.

GM has also learned that it's a mistake to outsource strategic management of its IT environment and architecture to a third party, which is what it did under the original agreement with EDS. After Szygenda was brought in and launched the second wave in 1996, he brought strategic IT management and information systems architecture in-house to be driven by GM. Szygenda put in place two layers of IT management at the start of the third wave. These managers report to him and oversee GM's relationships with outsourcers and the business units that they support.

"Every CIO who reports to me has a budget that they're measured against," says Szygenda. The outsourcers all

have to work within the framework that GM has devised, and while they're required to understand the GM businesses that they support, "they don't direct the business," Szygenda says.

Szygenda and his lieutenants believe that GM's existing outsourced model works well for a company its size because it brings the auto giant improved speed and agility for IT decision-making and execution. For example, before GM brought Kirk Gutmann over from Navistar International Corp. in 1997 to be global product development information officer, GM's global operations were bloated, the quality of its vehicles was sagging, and it was taking nearly four years for the company to bring a new vehicle to market.

By tapping into a group of specialty IT service providers, including Microsoft Corp. and Hewlett-Packard Co., and automating many of GM's operations, Gutmann has been able to help remove more than $1 billion from GM's costs and reduce the time to market for GM vehicles to 18 months.

GM's revised outsourcing approach of deploying a wide variety of IT vendors instead of a single vendor such as EDS "has allowed us to shift resources more quickly," says Gutmann. Syzgenda says it has also helped bring about double-digit gains in GM's engineering productivity, in part through GM's savvy use of technology.

GM has driven other hefty bottom-line benefits from its outsourcing model. In 2001 and 2002, GM achieved its first consecutive years of market-share gains in 25 years. The company has also cut $800 million annually from its IT costs for the past seven years. Still, Szygenda is the first to acknowledge that GM's outsourcing model wouldn't work for all companies. "There is no one answer for any company. You have to go in and decide what is best for that company," he says.

Depositing IT at Bank One

Chicago-based Bank One has taken a considerably different approach to managing its IT operations. In 1998, it signed a six-year, $1.4 billion contract with AT&T Solutions to manage the bank's voice and data networks and build an IP-based networking platform.

As part of that agreement, the bank also inked a seven-year, $420 million pact with IBM to manage most of its data center operations, including help desk support. At the time, Bank One, then called Banc One, was in the process of merging with First Chicago NBD Corp.

Since then, a lot more than the name has changed. The bank brought in a new CEO, Jamie Dimon, a tech-savvy veteran of Citigroup Inc., and CIO Austin Adams, the former CIO at First Union Corp. in Charlotte, N.C. The bank also negotiated to end its original contracts with AT&T Solutions and IBM before they were due to expire.

Savvy Tips

- **An outsourcing model needs effective checks and balances.** GM compiles report cards for all the vendors it works with, grading them in 20 areas.
- **Competition is key.** Using multiple vendors is critical to motivating them to strive for quality and keep costs down.
- **Don't outsource control** of your company's IT architecture or business processes.
- Make sure that there's a **strong business case** for outsourcing specific IT functions.
- **Management controls** – including project tracking and management systems – are keys to success.
- **One outsourcing model** won't work for every company.

Today, Bank One is intent on maintaining a ratio of 90% in-house IT staff and 10% contractors, most of whom are application developers. Compare that with a 70%-to-30% ratio just two years ago. The key driver behind the change is the dramatic shift in the IT labor market since the go-go days of the dot-com craze, when Bank One was having trouble recruiting skilled IT workers.

"If we would have approached [IT and telecom workers] about working for a bank four years ago, they would have laughed at us," says Adams, who in March 2001 joined the bank, which has $277 billion in assets. "The world has changed a lot in the last three or four years. We've been able to attract a lot of technology talent from firms that have been challenged over the last couple of years."

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One of the key accomplishments under the insourced IT model was a $500 million system conversion project that put all of the bank's transaction-related systems, including deposit, loan and treasury systems, on a single platform. The project started in 2001 and was completed in four stages, wrapping up in November 2002. The bank expects the conversions to help it cut $200 million in annual operating costs, improve customer service and give it the ability to more quickly implement new products and services.

Adams insists the decision to rescind the outsourcing agreements with IBM and AT&T Solutions last year wasn't a result of dissatisfaction with either vendor. In fact, the bank still does business with both, he says.

"It's not an issue with an entity; it's philosophical about how we want to do business," says Adams. "We feel strongly that technology is a key part of our company, and our ability to drive that is key and something that we want to more directly control."

It also has to do with containing costs. Adams says the business case for outsourcing those IT and networking functions no longer exists for Bank One. For instance, he notes that the incremental cost for a company its size to buy hardware, software and services directly from manufacturers and service vendors "is significantly lower" than the premiums it would have to pay an outsourcer to provide those resources.

Adams acknowledges that there's a lot of divergence among CIOs over outsourcing. In Bank One's case, he says, "we have a CEO who's very technology-literate and very supportive of us and our ability to manage this space." That helps explain why Bank One has recruited 1,800 IT professionals during the past 17 months, bringing its IT staff to 4,000 people.

Although Adams and Bank One remain committed to insourcing, he wouldn't rule out outsourcing some of its IT functions under the right circumstances. "I wouldn't bury my head in the sand if there was a better value proposition," he says. "It isn't a philosophy embedded in stubbornness but more about the environment and the business case and the economic conditions."

Predictable Surprises

Here's how to spot IT disasters in the making

Q&A

"You're never too old to be surprised." That was the response of then-Chairman Jock Welch when the European Commission vetoed General Electric Co.'s proposed $42 billion acquisition of Honeywell Inc. in 2001. But **Michael D. Watkins**, *an associate professor of business administration at Harvard Business School, argues that Welch had no business being surprised. In an article in this month's issue of* Harvard Business Review, *Watkins and co-author Max H. Bazerman posit that the institutional blind spots that scuttled Welch's deal are common throughout business and government. Watkins told Kathleen Melymuka how those same flaws can blindside an IT manager to disasters he should have seen coming.*

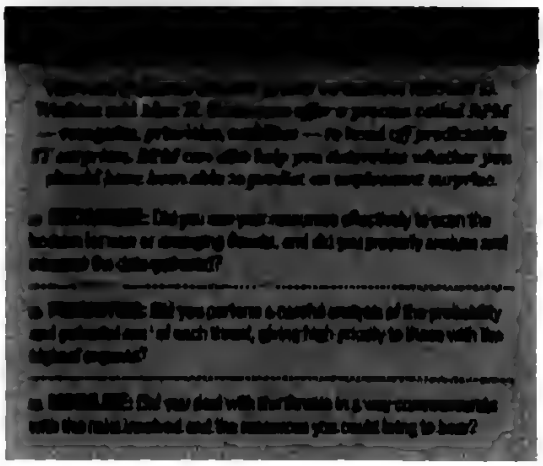
What's the difference between a true surprise and a problem that could have been predicted? There are many surprises that are bolts from the blue and can't possibly have been predicted. But if you ask senior managers in all kinds of companies whether there are problems they know about that probably are going to get worse and have the potential to flash into major disasters, the answer almost invariably is yes. Should a reasonable leader have recognized, prioritized and mobilized against the problem? If the answer is no, then hold them blameless; but many problems can be identified and dealt with.

You found three common causes of failure that can help managers avoid predictable surprises. What are they? The causes are psychological, organizational and political. Psychological vulnerabilities are flaws in the way people interpret information and make decisions. There's a well-understood tendency, for example, to exist in a state of denial, to stick with the status quo because it's comfortable or because you think that something with a very low probability is never going to happen.

Can you give an example? The Slammer worm. This was a well-recognized vulnerability in systems. The patch had been available forever. But apparently many IT mangers did not do what was necessary to deal with it. It was an entirely predicable surprise.

As an IT manager, how would I recognize psychological bias in my IT department? People tend to harbor illusions that things are better than they are: "We'll get by." It can become a group rationalization. Watch out when you hear people say, "We think it's going to be OK."

If I hear that, what do I do about it? Push back hard: What if it isn't OK? Test the assumptions people are making. Do they hold up? What have they done to test them? Make sure they're not giving undue weight to evidence that supports their preconceptions. Discover what's beginning to happen that, if left unchecked, will be a big problem. Take preventative action. Put on your "myself-a-year-from-now" hat and ask, "What will I be sorry for if I don't do?"



Tell me about organizational vulnerabilities. Those have to do with the way an organization processes information and puts together a picture of what's going on. The key problem is a tendency to silo information. Different people have different pieces of the puzzle, but they never get put together until after the fact. The 9/11 disaster is an example.

What can I do about organizational vulnerabilities? You need a mechanism for sharing information. Sometimes, it requires a cross-functional team put in place to look at emerging issues and trends. The best antidote is a leader forcing a certain kind of information integration that doesn't normally happen.

And what about political vulnerabilities? Political issues have to do with the ability of focused, dedicated special interests to advance their causes or prevent action at the expense of broader interests. In IT, it could be some group absolutely dedicated and focused on preventing having some legacy system taken away. They could be concealing information to protect a piece of overall architecture that is ripe for disaster. They're not going to let you touch their baby till something blows up.

How do you recognize that? Any time you have a fiefdom, you get into this. People are willing to suboptimize the whole in return for a legacy system getting protected too long. They can actually prevent implementation of surprise-avoidance.

What can I do? Look hard at incentives, and figure out how to alter them so people have more of a reason to cooperate. People often feel if they don't protect what they're working on, their own performance will suffer. You have to convince people to look more broadly, and you have to punish empire-building. If people are letting politics get in the way of the overall organization, you have to clamp down hard.

You recommend some practical "surprise-avoidance initiatives," the first being to ask people what dangers they see brewing. Isn't that obvious? Yes. But it's surprising how seldom people do it, and it's not obvious how you go about doing it. You need to get the right group and get them to work through an exercise, and that's not easy to do.

Why not? Really focusing on problem-avoidance means taking time away from productivity. It's hard to carve out time to engage in that. People see it as a luxury they can't afford right up to the point where they're spending 24/7 dealing with some disaster that was foreseeable.

Once you've identified surprises in the making, how do you prioritize them? You array the threats and look at [their] likelihood and costs and multiply those. Sometimes, that doesn't catch very-low-likelihood but high-cost threats, so it gets back to incentives. You need to create a structure where others see it as in their interest to attack these threats. Put people on notice that if they fail to prevent a preventable problem, they'll be held culpable.

Why is coalition-building important to confront threats effectively? Unless you've got full authority, which never happens, you're in the world of coalition-building. As an IT manager, if you see an emerging problem and you also see organizational resistance to tackling it, you've got to find the pocket of people who agree with you. Ask your customers what would happen if XYZ were to occur. Build momentum around an initiative to tackle the problem. ▶

Melymuka is a Computerworld *contributing writer. Contact her at kmelymuka@earthlink.net.*

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BRIEFS

US Airways Keeps EDS

US Airways Group Inc. has accepted a revised outsourcing contract with Electronic Data Systems Corp. that it had threatened to cancel. Terms of the new deal weren't disclosed. Under a 25-year contract signed in late 1997, EDS provides the airline with data processing and telecommunications services for reservations, ticketing, baggage tracking, and flight and data security. The original agreement was valued at about $200 million per year. US Airways, which has been under Chapter 11 bankruptcy protection since August, had accused EDS of failing to honor the contract's "most favored customer" clause by providing better terms to American Airlines Inc.

IT Spending Sluggish

According to recent survey results from Forrester Research Inc., only 27% of North American IT decision-makers said they will increase their staffs this year. And although 35% said they will increase IT spending by an average of 1.9% in 2003 - a decline from 2.3% in 2002 - the amount of IT being outsourced will inch up from 13% last year to 16% for 2003.

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BART PERKINS

Look Before You Leap to Outsource

MOST MAJOR CORPORATIONS are considering outsourcing everything from the corporate cafeteria to IT and beyond. Outsourcing is often touted as an easy way to achieve more functionality for less money, with less aggravation.

But how do these deals actually turn out? Customer-satisfaction researchers at a major IT outsourcer report that most outsourcing relationships deliver less-than-expected results, often leaving both sides disillusioned by the end of the first year.

If you want to pull the plug on your outsourcing deal, be aware that doing so is difficult and expensive at best — outsourcing is primarily a one-way street. You can avoid many outsourcing pitfalls by doing your homework before you negotiate a contract:

1. Define explicit outsourcing boundaries. Many outsourcers will try to persuade you to outsource most or all of IT. Most corporations are willing to outsource commodity functions, but not the areas that give the corporation its competitive advantage. Don't allow yourself to be pushed into outsourcing more than you have determined is appropriate. And never outsource one piece at a time without a master plan.

2. Understand your motives for outsourcing. Before entering into an outsourcing agreement, ruthlessly assess your motives. Are you primarily seeking to cut costs, improve service or allow management to focus on the business? Or has your company simply decided that IT isn't a core competency and just wants to get rid of the aggravation? Being clear about your reasons will allow a fair evaluation of the outsourcing deal after the first year.

3. Carefully analyze and understand your cost structure. Identify and remove inefficiencies before outsourcing; otherwise, only your outsourcer will benefit. Evaluate your cost structure in sufficient detail to have leverage over your outsourcer. Beware of any outsourcer that offers to cut your costs *x*% without doing any analysis!

And if your outsourcer uses the new "utility" pricing for on-demand computing, make sure you understand all the implications — there's not a lot of industry experience with it yet.

4. Analyze the total cost of outsourcing. Before you weigh the price of outsourcing against your current costs, start with the outsourcer's bid, then add the costs of preparing and evaluating a request for proposals, the migration/switching costs and the cost of managing the outsourcer.

5. Assess the hidden effects of outsourcing. Outsourcing imposes discipline on your organization. Shifts in architectural direction can be more difficult. Unplanned changes become expensive and may not occur in the time frame you desire. Adapting to the rigorous processes required by an outsourcer may be difficult in some corporate cultures.

6. Closely examine security and privacy. The new cyberdisclosure laws will essentially make security breaches at your outsourcer equivalent to security breaches at your own company. You will be equally responsible whether your customers' data is compromised, stolen or hacked at your site or the outsourcer's site. Your exposure and liabilities are significantly multiplied — investigate carefully.

7. Communicate honestly with your staff. Outsourcing generates apprehension, and rumors will fly. Unless you have a compelling message and communicate candidly, your best people may walk out the door.

8. Design a viable exit strategy. Supplier failures are occurring at an alarming rate. Explore options and fallback positions before you need them.

9. Make sure initial stakeholders on both sides remain accountable. Many outsourcing arrangements fail because the original stakeholders disappear and their replacements are often far less committed to the deal.

10. Consider offshore options. Advances in communications technology have made offshore outsourcing increasingly viable. Costs can be significantly lower. But understand the impact of international travel, language difficulties and time-zone differences on your business.

The foundation of successful outsourcing is clearly understanding what you are outsourcing and why. Outsourcing can be an excellent solution, but it's not a panacea. Don't follow the outsourcing lemmings blindly over the cliff. Make sure you fully understand what, why, when where, who — and how much.

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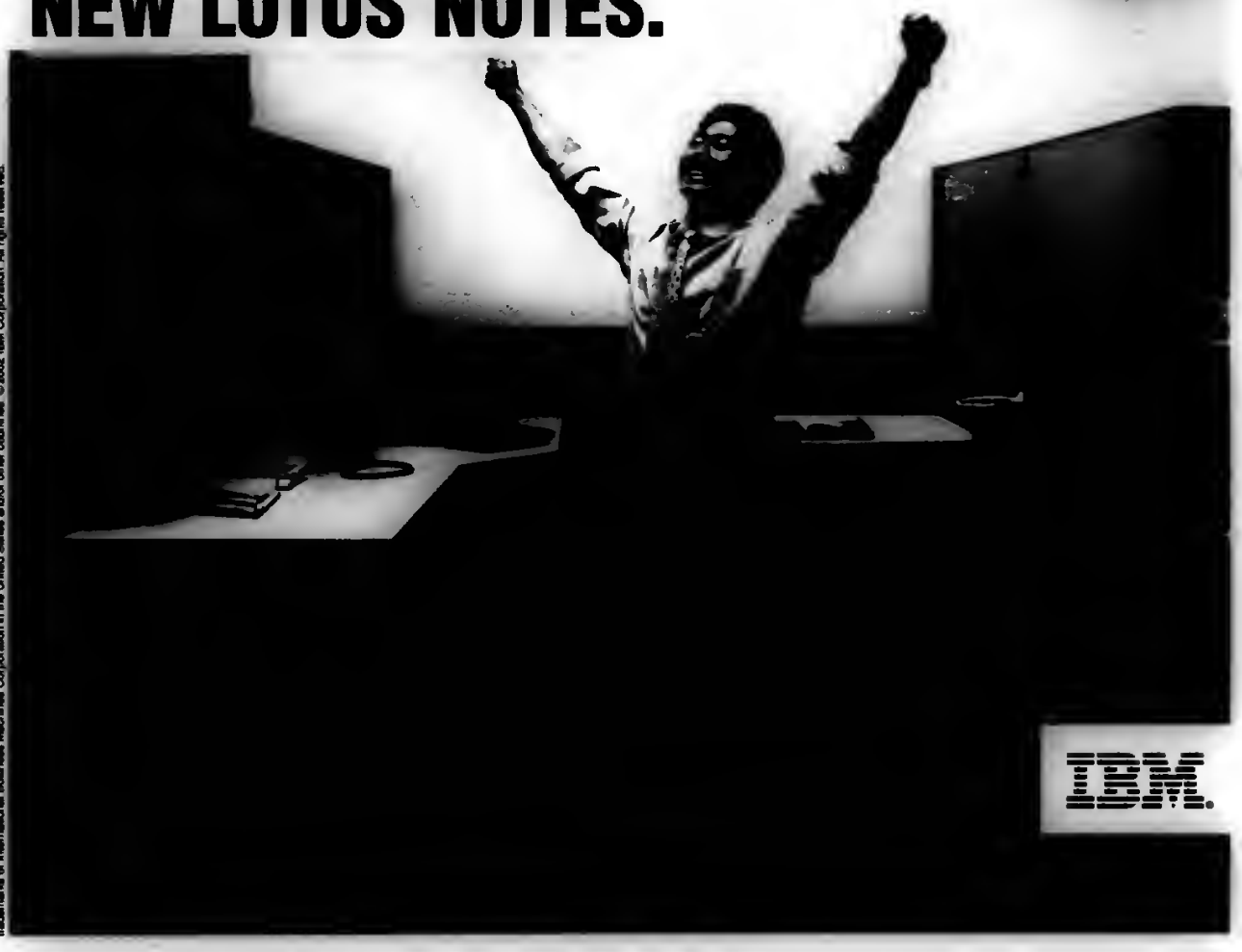

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Sr Programmer/Business Analyst (Chicago, IL) Participate in architectural design and use case analysis on web-based mgt info syst w/ Oracle/Win2000 env using PL/SQL, VB, TOAD, MS Project and Rational Robot, interface b/t info tech and business groups to identify user needs, prepare busi requirement documents, and develop project packages applying JAD and RAD. Requires BS in Com.Sc, Engr or MIS plus 3 yrs. exp. Full-time/competitive salary. Resume to: HR, NetEffects, Inc., 500 Chesterfield Ctr., Ste 350, St. Louis, MO 63017

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Consultant sought by NYC IT firm for publishing related projects, system analysis & design. BS degree, IT related major. Broad skills in desktop publishing, web technologies, and system integration. Freq. travel. Contact: careers@desknetinc.com

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IT Developer 3 Charlotte, NC. Wachovia Corp. Create doc. detailing hardware & software infrastructure, interdependencies of each component & IVR appl dev standards for EIVR environ. Reqs: BA or CIS & 3 yrs exp. in the pos. off or Software Eng. or Comp. Consultant. The 3 yrs reqd exp must incl work w/IVR application design, dev., implementation & work in high-volume call center (2-3 million calls/mos.). 1 yr of reqd exp must incl IVR sys. w/PBX switches (i.e. Cisco/Genesys ICM, Aspect ACD, SL1, SL100 & AT&T G3) & IVR sys. w/SpeechWorks ASR software or similar software package. M-F 8-5. Send resume to Randall Buck, Wachovia Corporation, 1525 West W.T. Harris Blvd., NC 0775, Charlotte, NC 28262-0775. No phone calls.

System Admins to install, maintain, administer Windows NT, Linux, HP-UX, SCO/Solaris; plan, implement, maintain and troubleshoot LAN/WAN installations; manage networking protocols such as TCP/IP, IPX/SPX, etc. Install, upgrade network computer hardware/software. Systems Analysts to analyze, design appls using Java, VB, Oracle, SQL Server, ASP, Active X, HTML/DHTML, JavaScript, etc. under Windows OS; write triggers and stored procedures in account for business processes; perform req. analyses; develop user interface reports. Require: B.S. or foreign equiv with concr. in CS/Science/Engg. (Any branch) and 2 yrs of exp. in IT. Travel involved. High Salary. F/T. Resume to: Radiant Technologies, Inc., 335 Majestic cove, Alpharetta, GA 30004

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This individual must be highly organized and used to working under tight deadlines while working on multiple overlapping projects. The News Media Manager will work closely with News Producers and Mgt/Segment to ensure the timely and accurate production of newscasts, special reports and special segments. Prior supervisory experience preferred.

Please send resume to: Ted Holtzclaw News Operations Manager WABC-TV 7 Lincoln Square 4th Fl New York, NY 10023 No calls please. We are an Equal Opportunity Employer

Computers-Project Leaders needed. Requires BS degree or equivalent and/or relevant work experience. Experience must include two years working with Java, OSS and Tandem. Duties include: Plan, direct and coordinate activities of projects. Analyze business requirements and resolve technical problems. Experience with ASP, NET and SQL are a plus. Mail res. ref. and sal. req. to: Opus Software Solutions Private Limited, Inc., 1480 Route 9 North, #203, Woodbridge, NJ 07095

Software Engineers with interactive business applications, client-interface extranet & multi-tiered architecture experience to work in our Burlington, MA office. Send resume to: Jay R. Smith Mfg. Co., Attn: HR Mgr., Req#5565, P.O. Box 3, Montgomery, AL 36109-0237 or online to mike.pols@jrsmith.com with Req#5565 in subject line. EOE

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Page number refers to page on which story begins. Company names can also be searched at www.computerworld.com.

3COM CORP 14
724 INC. 6
ACCENTURE LTD. 42
ADVANCED FIBRE COMMUNICATIONS INC. 6,8
ADVANCED MICRO DEVICES INC. 38,57
ALLSTATE INSURANCE CO. 38
AMERIPORT INC. 14
AMERICA ONLINE INC. 38
AMERICAN AIRLINES INC. 13,46
AMERICAN TRANS AIR INC. 7
AMR CORP. 38
ARC ADVISORY GROUP INC. 14
ASTRUM SOFTWARE CORP. 10
AT&T CORP. 14
AT&T SOLUTIONS 30
AVENTAIL CORP. 14
AVIS RENT A CAR SYSTEM INC. 13
BANK ONE CORP. 38
BARRY INC. 38
BEA SYSTEMS INC. 4,9,15
BERLIEN MANUFACTURING CO. 6
BMC SOFTWARE INC. 10,55
CAP GEMINI ERNST & YOUNG 42
CARE NEW ENGLAND HEALTHSYSTEM INC. 14
CARNEGIE MELLON UNIVERSITY 6,38
CERT COORDINATION CENTER 8
CISCO CORP. 1
CISCO SYSTEMS INC. 14,30,32
CITIGROUP INC. 38
CITIGROUP VENTURE CAPITAL EQUITY PARTNERS LP 10
CITRIX SYSTEMS INC. 30
COAST CAPITAL SAVINGS 38
CODEWEAVERS INC. 57
COMPUTER ASSOCIATES INTERNATIONAL INC. 10
CONVERGE INC. 38
CORIO INC. 38
CROSSLOGIX INC. 10
CUTTER CONSORTIUM 1
DATA PROCESSORS INTERNATIONAL INC. 38
DATAQUEST INC. 1
DATASTOR SYSTEMS INC. 37
DE LAGE LANDEN FINANCIAL SERVICES INC. 10
DELL COMPUTER CORP. 14
DELOITTE CONSULTING 14
DELTA AIR LINES INC. 1,10,30
DISTRIBUTED MANAGEMENT TASK FORCE INC. 14
DOCUMENTUM INC. 38
DOLE FOOD CO. 38
DREYER MEDICAL CLINIC 30
DYNAMESOFT INC. 38
ELECTRONIC DATA SYSTEMS CORP. 46,48
EMC CORP. 10,18
ENTRUST GROUP 7
EXPAND NETWORKS INC. 10
FACEPIME COMMUNICATIONS INC. 38
FAIRCHILD SEMICONDUCTOR INTERNATIONAL INC. 7
FEDERAL SOURCES INC. 1
FENNEMORE CRAIG PC 7
FENWICK & WEST LLP 6
FIRST UNION CORP. 46
FIRST USA INC. 6
FLAMENCO NETWORKS INC. 10
FORRESTER RESEARCH INC. 18,48
FORTEL INC. 10
FUNK SOFTWARE INC. 10
GARTNER INC. 1,7,34,35,38
GENERAL ELECTRIC CO. 46
GENERAL MOTORS CORP. 38
GEOLOGISTICS CORP. 38
GSA INFORMATION GROUP INC. 30,58
GLOBAL DATA SYSTEMS USA 1
GM LOCOMOTIVE GROUP 58
GMAC FINANCIAL SERVICES 38
GROOVE NETWORKS INC. 6,38
HARVARD BUSINESS SCHOOL 46
HEWLETT-PACKARD CO. 10,57,62
HITACHI LTD. 14
HONEYWELL INC. 44
HUGHES ELECTRONICS CORP. 38
IBM 10,28,34,35,36,38,57,62
IDC 14
INC. GLOBAL INC. 6
INTEL CORP. 10,28,36,57
INTERNET ALLIANCE 7
INTERNET ENGINEERING TASK FORCE 14,58
INTERNET SECURITY SYSTEMS INC. 6,64
INVERTIX CORP. 38
INVISION INC. 38
JABBER INC. 38
LAVA NETWORKS INC. 32
LEVERAGE PARTNERS INC. 46
LEXMARK INTERNATIONAL INC. 17
LM ERICSSON TELEPHONE CO. 38
LOUISIANA DEPARTMENT OF NATURAL RESOURCES 1
MACROMEDIA INC. 14
MERRILL LYNCH & CO. 30
META GROUP INC. 18,30
MICROSTREAM RESOURCES 38
MICROSOFT CAPITAL CORP. 10
MICROSOFT CORP. 10,7,8,13,14,28,57,62
MOTOROLA INC. 38
NATIONAL ASSOCIATION OF MANUFACTURERS 6
NATIONAL ASSOCIATION OF STATE CHIEF INFORMATION OFFICERS 1
NATIONAL INFRASTRUCTURE PROTECTION CENTER 8
NAVISTAR INTERNATIONAL CORP. 30
NCR CORP. 7
NETWORK ENGINES INC. 14
NEW YORK STOCK EXCHANGE 30
NICHOLSON MANUFACTURING CO. 7
NOKIA CORP. 38
NORTHBROOK TECHNOLOGY OF NORTHERN IRELAND LTD. 38
NORTHWEST AIRLINES INC. 10
NOTEPAGE INC. 38
NOVELL INC. 10
OCEANIA SENIOR TECHNOLOGIES INC. 57
OMTX SOFTWARE CORP. 7
ORGANIZATION FOR INTERNET SECURITY 6
ORGANIZATION FOR THE ADVANCEMENT OF STRUCTURED INFORMATION STANDARDS 14
OWENS & MINOR INC. 1
PACKETEER INC. 14
PALM INC. 14,37
PANTELLOS GROUP LP 10
PATH COMMUNICATIONS INC. 10
PEOPLESOFT INC. 7
PEREGRINE SYSTEMS INC. 10
PERIOT SYSTEMS INC. 30,34
PEROT SYSTEMS CORP. 1
PINK SOLUTIONS LLC 6
PRESENCEWORKS INC. 38
QUAKER CHEMICAL CORP. 30
QUEST SOFTWARE INC. 38
QWEST COMMUNICATIONS INTERNATIONAL INC. 38
RED HAT INC. 6
REDLINE NETWORKS INC. 10
REUTERS AMERICA INC. 7
SANCHEZ COMPUTER ASSOCIATES INC. 38
SANS INSTITUTE 6
SAP AG 8
SIEBEL INC. 1
SIEBOWAL INC. 6
SIEBEL SYSTEMS INC. 7
SILICON DEFENSE INC. 38
SOUTHERN CO. 10
SPIRE SECURITY LLC 8
STATIC CONTROL COMPONENTS INC. 17
SUN MICROSYSTEMS INC. 1,57,58,59
SYBASE INC. 10
TALISMA CORP. 38
TARIYARA SMITH, HORN AND BRAUN ACCOUNTANCY CORP. 1
TARANTELLA INC. 37
TEACHERS INSURANCE AND ANNUITY ASSOCIATION - COLLEGE RETIREMENT EQUITIES FUND 1
TEACHERS' MERCHANT BANK 10
TEEMY PLASTICS LLC 1
THE ALLSTATE CORP. 38
THE DIRECT MARKETING ASSOCIATION 7
THE FARMINGTON NATIONAL BANK 1
THE INDEPENDENT INSTITUTE 14
THE LISTED INC. 10
THE SCO GROUP 6,57
THE SERVICEMASTER CO. 1,10
THE UNIVERSITY OF TEXAS AT DALLAS 6
THOLI SOFTWARE 38
TIBCO GLOBAL RESTAURANTS INC. 38
U.S. DEPARTMENT OF HOMELAND SECURITY 8
U.S. FEDERAL TRADE COMMISSION 7
U.S. SECURITIES AND EXCHANGE COMMISSION 10,28
UNITED PARCEL SERVICE INC. 1
UNIVERSITY OF CALIFORNIA, BERKELEY 10
US AIRWAYS GROUP INC. 32
UTSTARCOM INC. 14
VANTAGE PARTNERS LLC 32
VAN SPHERE INC. 38
VERITAS SOFTWARE CORP. 14
VILLANOVA UNIVERSITY 1
VIRTELA COMMUNICATIONS INC. 38
VISION SERVICE PLAN 1
VITRIA TECHNOLOGY INC. 10
VOLVO FINANCE NORTH AMERICA INC. 6
WIND RIVER SYSTEMS INC. 10
WIRELESS RETAIL INC. 1
WORLD WIDE WEB CONSORTIUM 10
WORLDCOM INC. 10
WORLDSPAN LP 10
YAHOO INC. 38
ZAPTHINK LLC 10

Continued from page 1

Companies

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And Ervin isn't alone, according to a study released last week by Dataquest Inc. in San Jose. The study, "Investment Decisions: Preparing for Organizational Disasters," found that IT managers from 205 companies representing eight vertical industries in the U.S. aren't investing appropriately in disaster plans because of inadequate budgets.

"Budget constraints are forcing an average of 40% of respondents to rely on a best guess to determine potential risk rather than obtaining formal assessments, which would be too costly," said Tony Adams, principal analyst at Dataquest's IT Services group.

"Preparation is key, and without adequate investment for protection of critical systems, the repercussions of disasters will be lengthier and more costly," he said.

A security manager at one of the nation's largest banks, who spoke on condition of anonymity, said the sheer size of his company means that departments report to various executives and require different levels of certification by third-party disaster assessment firms. As a result, "business continuity planning is as the business sees fit," the manager said.

Moreover, it's difficult to show the return on investment from hiring third-party firms to certify disaster recovery processes and assess risk, he said. "Companies in this space came off as if they're looking for big dollars to tell you what you already know. We all see the best-practice picture at the end of the tunnel, but we choose due care and sound business decision processes to get to that end," he said.

In any case, crisis management plans have been implemented at 53% of the sites that responded to the Dataquest survey, and an additional 30% that don't already have plans are considering developing them, according to the study. But 17% of respondents said that they don't foresee developing any such plans.

"It could be merely that clarity about the aim and function of crisis management is needed," according to the study. "It could also be explained in terms of the IT systems not being deemed mission-critical in importance."

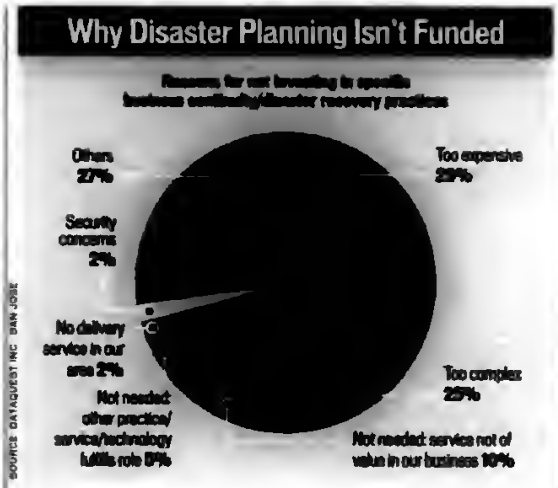
In fact, only 10% of companies said they always evaluate new initiatives in terms of business continuity.

Susan Bradley, a security manager at Tamiyasu, Smith, Horn and Braun Accountancy Corp., an accounting firm in Fresno, Calif., said the small to medium-size business community is never proactive when it comes to ensuring business continuity.

"We don't plan. We don't assess. We don't analyze. We don't test. We don't plan on redundancy," Bradley said. The Dataquest survey indicates that many large companies aren't doing much better, she added.

Although the Dataquest study focused on the responses and plans of IT managers, John Keast, chief operating officer at SEEC Inc., a Pittsburgh firm that develops software for the insurance and finance industries, said that although the CIO designs and implements the plan and likely orchestrates its execution during a disaster, the ultimate responsibility for focusing the appropriate resources on disaster recovery and continuity of operations planning rests with the CEO, the chief operating officer and the board of directors.

"Losing data that affects business operations is avoidable and unacceptable," said Keast. "So CEOs and COOs must make it their priority."


Why Disaster Planning Isn't Funded
Reasons for not investing in specific business continuity/disaster recovery practices
Others 27%
Too expensive 23%
Security concerns 2%
No delivery service in our area 2%
Too complex 25%
Not needed: other practice/ service/technology fulfills role 8%
Not needed: service not of value in our business 10%
SOURCE: DATAQUEST INC. SAN JOSE

> **We don't plan. We don't assess. We don't analyze. We don't test.**
>
> **SUSAN BRADLEY,** SECURITY MANAGER, TAMIYASU, SMITH, HORN AND BRAUN ACCOUNTACY CORP.

ROLE-PLAYING

A mock disaster scenario was played out at *Computerworld*'s recent Premier 100 conference. To read about the results, visit our Web site:

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Correction

In the November Q&A on last month's cover, Quest Communications International Inc., which said its customer-service provider Avaya Inc. had lost, was misidentified as Quest Software Inc., a maker of application management tools.

Continued from page 1

States

"That's pretty significant," Kane said.

McLean, Va.-based FSI, a research firm for the business-to-government market, said IT spending in the states will reach $40.7 billion in the next fiscal year, an increase of less than 2% over this year. And as they continue to scrape for IT funding, more states are appointing enterprise architects to map out IT and business process strategies.

Two years ago, only two states had specifically appointed enterprise architects. Since then, the number has climbed to 22, said Gerry Wethington, Missouri's CIO and president of the Lexington, Ky.-based National Association of State Chief Information Officers.

Enterprise architecture is a process for defining IT and business process principles and standards. It's also used by federal and state governments to integrate and consolidate IT infrastructures that have been built agency by agency in a stovepipe fashion, without coordination.

Wethington said his state's use of enterprise architecture planning has given him the means to set common standards and battle agencies accustomed to making their own IT decisions. "If I had not had that chief architect . . . I would have had eight to 12 different agencies fighting for their turf," he said, referring to a particular help desk consolidation project. "I can overcome turf," Wethington added.

The states are also being pushed into using enterprise architecture by the Bush administration, which wants interoperability with state systems, said Howard Stern, senior vice president of FSI.

One IT manager who says she has solved the problem of redundant systems consolidation is Cathy Maras-O'Leary, CIO of Cook County, Ill. The second-largest county in the U.S., Cook County centralized storage, mainframe and network support for 150 agencies.

"You're not duplicating cost," Maras-O'Leary said. Moreover, she added, "e-commerce for us can be very easy because all our data is residing on our architecture."

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Page number refers to page on which story begins. Company names can also be searched at **www.computerworld.com.**

3COM CORP 14
724 INC 8
ACCENTURE LTD 42
ADVANCED FIBRE COMMUNICATIONS INC 6,8
ADVANCED MICRO DEVICES INC 28,37
ALLSTATE INSURANCE CO 38
AMBERPOINT INC 10
AMERICA ONLINE INC 36
AMERICAN AIRLINES INC 13,48
AMERICAN TRANS AIR INC 7
AMR CORP 42
ARC ADVISORY GROUP INC 18
ASTRUM SOFTWARE CORP 10
AT&T CORP 14
AT&T SOLUTIONS 42
AVENTAIL CORP 14
AVIS RENT A CAR SYSTEM INC 18
Bank ONE CORP 42
BANTU INC 38
BEA SYSTEMS INC 1,10,18
BEHLEN MANUFACTURING CO 8
BMC SOFTWARE INC 10,39
CAP GEMINI ERNST & YOUNG 42
CARE NEW ENGLAND HEALTH SYSTEM INC 14
CARNEGIE MELLON UNIVERSITY 8,25
CERT COORDINATION CENTER 8
CISCO CORP 1
CISCO SYSTEMS INC 14,30,32
CITIGROUP INC 42
CITIGROUP VENTURE CAPITAL EQUITY PARTNERS LP 10
CITRIX SYSTEMS INC 30
COAST CAPITAL SAVINGS 38
CODEWEAVERS INC 37
COMPUTER ASSOCIATES INTERNATIONAL INC 10
COMVERSE INC 36
CORIO INC 38
CROSSLOGIX INC 18
CUTTER CONSORTIUM 1
DATA PROCESSORS INTERNATIONAL INC. 36
DATAQUEST INC 1
DATASTICK SYSTEMS INC 37
DE LAGE LANDEN FINANCIAL SERVICES INC 10
DELL COMPUTER CORP 18
DELOITTE CONSULTING 14
DELTA AIR LINES INC 1,10,20
DISTRIBUTED MANAGEMENT TASK FORCE INC 18
DOCUMENTUM INC 36
DOLE FOOD CO 42
DREYER MEDICAL CLINIC 30
DYNAMICSOFT INC 36
ELECTRONIC DATA SYSTEMS CORP 42,48
EMC CORP 14,18
ERPANALYST GROUP 2
EXPAND NETWORKS INC 31
FACETIME COMMUNICATIONS INC 36
FAIRCHILD SEMICONDUCTOR INTERNATIONAL INC 7
FEDERAL SOURCES INC 1
FENNEMORE CRAIG PC 7
FENWICK & WEST LLP 8
FIRST UNION CORP 42
FIRST USA INC 8
FLAMENCO NETWORKS INC 10
FORRESTER RESEARCH INC. 18,48
FORTEL INC 10
FUNK SOFTWARE INC 14
GARTNER INC 1,7,14,20,30
GENERAL ELECTRIC CO 44
GENERAL MOTORS CORP 42
GEOLOGISTICS CORP 30
GHSA INFORMATION GROUP INC 30,39
GLOBAL DATA SYSTEMS USA 1
GM LOCOMOTIVE GROUP 42
GMAC FINANCIAL SERVICES 42
GROOVE NETWORKS INC. 6,36
HARVARD BUSINESS SCHOOL 44
HEWLETT-PACKARD CO 10,17,42
HITACHI LTD 14
HONEYWELL INC 44
HUGHES ELECTRONICS CORP 42
IBM 1,6,10,14,18,18,25,28,36,37,42
IDC 14
IMC GLOBAL INC 8
INTEL CORP 10,25,28,37
INTERNET ALLIANCE 7
INTERNET ENGINEERING TASK FORCE 18,39
INTERNET SECURITY SYSTEMS INC 8,54
INVERTIX CORP 39
ITWORX INC 31
JABBER INC 36
LATIS NETWORKS INC 35
LEVERAGE PARTNERS INC 48
LEXMARK INTERNATIONAL INC 17
LM ERICSSON TELEPHONE CO 38
LOUISIANA DEPARTMENT OF NATURAL RESOURCES 1
MACROMEDIA INC 14
MERRILL LYNCH & CO 20
META GROUP INC 18,39
MICRODESIGN RESOURCES 25
MICROSOFT CAPITAL CORP 10
MICROSOFT CORP 1,6,7,8,10,14,36,37,42
MOTOROLA INC 36
NATIONAL ASSOCIATION OF MANUFACTURERS 8
NATIONAL ASSOCIATION OF STATE CHIEF INFORMATION OFFICERS 1
NATIONAL INFRASTRUCTURE PROTECTION CENTER 8
NAVISTAR INTERNATIONAL CORP 42
NCR CORP 7
NETWORK ENGINES INC 14
NEW YORK STOCK EXCHANGE 20
NICHOLSON MANUFACTURING CO 7
NOKIA CORP 36
NORTHBROOK TECHNOLOGY OF NORTHERN IRELAND LTD. 39
NORTHWEST AIRLINES INC 10
NOTEPAGE INC 36
NOVELL INC 10
OCEANA SENSOR TECHNOLOGIES INC. 37
ONYX SOFTWARE CORP 7
ORGANIZATION FOR INTERNET SECURITY 8
ORGANIZATION FOR THE ADVANCEMENT OF STRUCTURED INFORMATION STANDARDS 10
OWENS & MINOR INC 1
PACKETEER INC. 31
PALM INC. 14,37
PANTELLOS GROUP LP 18
PATH COMMUNICATIONS INC 10
PEOPLESOFT INC 7
PEREGRINE SYSTEMS INC 10
PERSIT NETWORKS INC 30,31
PEROT SYSTEMS CORP 1
PIVX SOLUTIONS LLC 8
PRESENCEWORKS INC 36
QUAKER CHEMICAL CORP 20
QUEST SOFTWARE INC. 33
QWEST COMMUNICATIONS INTERNATIONAL INC. 53
REID NAT INC 8
REDLINE NETWORKS INC 10
REUTERS AMERICA INC 7
SANCHEZ COMPUTER ASSOCIATES INC 39
SANS INSTITUTE 8
SAP AG 8
SEEC INC. 1
SENDMAIL INC 8
SIEBEL SYSTEMS INC 7
SILICON DEFENSE INC 30
SOUTHERN CO 14
SPIRE SECURITY LLC 8
STATIC CONTROL COMPONENTS INC. 17
SUN MICROSYSTEMS INC 1,10,18,25,36
SYBASE INC 10
TALISMA CORP 36
TAMEYASU SMITH, HORN AND BRAUN ACCOUNTANCY CORP 1
TARANTELLA INC 37
TEACHERS INSURANCE AND ANNUITY ASSOCIATION - COLLEGE RETIREMENT EQUITIES FUND 1
TEACHERS' MERCHANT BANK 10
TESSY PLASTICS LLC 1
THE ALLSTATE CORP 38
THE DIRECT MARKETING ASSOCIATION 7
THE HUNTINGTON NATIONAL BANK 1
THE INDEPENDENT INSTITUTE 10
THE LIMITED INC 18
THE SCO GROUP 6,37
THE SERVICEMASTER CO 1,18
THE UNIVERSITY OF TEXAS AT DALLAS 8
TIVOLI SOFTWARE 30
TRICON GLOBAL RESTAURANTS INC 42
U.S. DEPARTMENT OF HOMELAND SECURITY 8
U.S. FEDERAL TRADE COMMISSION 7
U.S. SECURITIES AND EXCHANGE COMMISSION 10,30
UNITED PARCEL SERVICE INC. 1
UNIVERSITY OF CALIFORNIA, BERKELEY 29
US AIRWAYS GROUP INC. 42
UTSTARCOM INC 14
VANTAGE PARTNERS LLC 38
VAYUSPHERE INC. 36
VERITAS SOFTWARE CORP 14
VILLANOVA UNIVERSITY 1
VIRTELA COMMUNICATIONS INC 30
VISION SERVICE PLAN 1
VITRIA TECHNOLOGY INC. 18
VOLVO FINANCE NORTH AMERICA INC 8
WIND RIVER SYSTEMS INC 10
WIRELESS RETAIL INC. 1
WORLD WIDE WEB CONSORTIUM 10
WORLDCOM INC 14
WORLDSPAN LP 10
YAHOO INC 36
ZAPTHINK LLC 10

Continued from page 1

Companies

ministrator at Tessy Plastics LLC in Lynchburg, Va., said a lack of funding has forced him to buy used equipment to back up his systems. "We've implemented a used tape drive on our main server and do good backups," he said. "If I had to purchase the stuff new, I couldn't have done it. . . . Right now, money is tight."

And Ervin isn't alone, according to a study released last week by Dataquest Inc. in San Jose. The study, "Investment Decisions: Preparing for Organizational Disasters," found that IT managers from 205 companies representing eight vertical industries in the U.S. aren't investing appropriately in disaster plans because of inadequate budgets.

"Budget constraints are forcing an average of 40% of respondents to rely on a best guess to determine potential risk rather than obtaining formal assessments, which would be too costly," said Tony Adams, principal analyst at Dataquest's IT Services group.

"Preparation is key, and without adequate investment for protection of critical systems, the repercussions of disasters will be lengthier and more costly," he said.

A security manager at one of the nation's largest banks, who spoke on condition of anonymity, said the sheer size of his company means that departments report to various executives and require different levels of certification by third-party disaster assessment firms. As a result, "business continuity planning is as the business sees fit," the manager said.

Moreover, it's difficult to show the return on investment from hiring third-party firms to certify disaster recovery processes and assess risk, he said. "Companies in this space came off as if they're looking for big dollars to tell you what you already know. We all see the best-practice picture at the end of the tunnel, but we choose due care and sound business decision processes to get to that end," he said.

In any case, crisis management plans have been implemented at 53% of the sites that responded to the Dataquest survey, and an additional 30% that don't already have plans are considering developing them, according to the study. But 17% of respondents said that they don't foresee developing any such plans.

"It could be merely that clarity about the aim and function of crisis management is needed," according to the study. "It could also be explained in terms of the IT systems not being deemed mission-critical in importance."

In fact, only 10% of companies said they always evaluate new initiatives in terms of business continuity.

Susan Bradley, a security manager at Tamiyasu, Smith, Horn and Braun Accountancy Corp., an accounting firm in Fresno, Calif., said the small to medium-size business community is never proactive when it comes to ensuring business continuity.

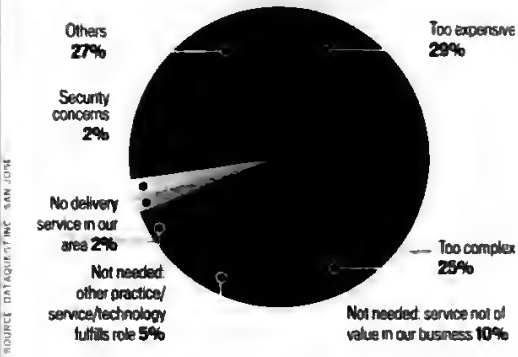
"We don't plan. We don't assess. We don't analyze. We don't test. We don't plan on redundancy," Bradley said. The Dataquest survey indicates that many large companies aren't doing much better, she added.

Although the Dataquest study focused on the responses and plans of IT managers, John Keast, chief operating officer at SEEC Inc., a Pittsburgh firm that develops software for the insurance and finance industries, said that although the CIO designs and implements the plan and likely orchestrates its execution during a disaster, the ultimate responsibility for focusing the appropriate resources on disaster recovery and continuity of operations planning rests with the CEO, the chief operating officer and the board of directors.

"Losing data that affects business operations is avoidable and unacceptable," said Keast. "So CEOs and COOs must make it their priority."

Why Disaster Planning Isn't Funded

Reasons for not investing in specific business continuity/disaster recovery practices


Others 27%
Too expensive 29%
Security concerns 2%
No delivery service in our area 2%
Too complex 25%
Not needed: other practice/ service/technology fulfills role 5%
Not needed: service not of value in our business 10%

SOURCE: DATAQUEST INC., SAN JOSE

> **We don't plan. We don't assess. We don't analyze. We don't test.**
>
> **SUSAN BRADLEY,** SECURITY MANAGER, TAMIYASU, SMITH, HORN AND BRAUN ACCOUNTACY CORP.

ROLE-PLAYING

A mock disaster scenario was played out at *Computerworld*'s recent Premier 100 conference. To read about the results, visit our Web site.

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Correction

In the Newsmaker Q&A in last week's issue, Qwest Communications International Inc., which sold its application service provider division to Corio Inc. last fall, was misidentified as Quest Software Inc., a maker of application management tools.

Continued from page 1

States

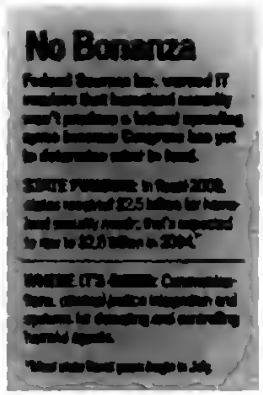
"That's pretty significant," Kane said.

McLean, Va.-based FSI, a research firm for the business-to-government market, said IT spending in the states will reach $40.7 billion in the next fiscal year, an increase of less than 2% over this year. And as they continue to scrape for IT funding, more states are appointing enterprise architects to map out IT and business process strategies.

Two years ago, only two states had specifically appointed enterprise architects. Since then, the number has climbed to 22, said Gerry Wethington, Missouri's CIO and president of the Lexington, Ky.-based National Association of State Chief Information Officers.

Enterprise architecture is a process for defining IT and business process principles and standards. It's also used by federal and state governments to integrate and consolidate IT infrastructures that have been built agency by agency in a stovepipe fashion, without coordination.

Wethington said his state's use of enterprise architecture planning has given him the means to set common standards and battle agencies accustomed to making their own IT decisions. "If I had not had that chief architect . . . I would have had eight to 12 different agencies fighting for their turf," he said, referring to a particular help desk consolidation project. "I can overcome turf," Wethington added.



The states are also being pushed into using enterprise architecture by the Bush administration, which wants interoperability with state systems, said Howard Stern, senior vice president of FSI.

One IT manager who says she has solved the problem of redundant systems consolidation is Cathy Maras-O'Leary, CIO of Cook County, Ill. The second-largest county in the U.S., Cook County centralized storage, mainframe and network support for 150 agencies.

"You're not duplicating cost," Maras-O'Leary said. Moreover, she added, "e-commerce for us can be very easy because all our data is residing on our architecture."

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Patch It Right Now

HAS YOUR SENDMAIL BEEN PATCHED? Are you sure? If the answer is no, stop reading this and get it taken care of. Not later today. Not later this minute. You're already a week behind, and hackers have had exploit code working since last Tuesday. There are no workarounds. Your firewall won't protect you. Your virus scanner won't protect you. A properly patched sendmail server that's upstream from your site *will* remove the fangs from a malicious e-mail message that exploits this security hole — but do you really want to depend on the kindness of strangers?

You can't afford that risk. So find out. And if you have sendmail systems that haven't been patched or upgraded, do it right now!

How bad is this mess? Between 50% and 75% of all e-mail on the Internet is handled by sendmail servers. The bug that creates the security hole is about a decade old, which means if you're using sendmail, you do have the bug.

And since it took less than 48 hours for two separate groups of hackers to come up with working attacks on this security hole after it was officially announced, you can reasonably expect attacks to show up on the Internet pretty quickly, too.

Worse still, you may already have been hit by one. A successful attack won't leave any evidence on your system log. Which means someone who's just testing the technique may already have tried it on your unpatched sendmail systems, and you have no way of knowing.

The good news — yes, there *is* some good news here — is that this is one very subtle security hole. It's no simple buffer-overflow problem, like so many we've heard about. In this case, the buffer that lets the bad guys in is checked to make sure it doesn't overflow. Trouble is, there's a bug in one of the checking routines. And if a bad guy exploits that coding error — but *only* if the bad guy knows *exactly* how to exploit that specific coding error — sendmail is vulnerable.

Which explains why it took 10 years for anyone to spot the problem, and why it was Internet Security Systems in Atlanta that spotted it, not some malicious adolescent in his bedroom. The problem was buried deep in code that has been available to security experts and nasty crackers alike — and until now, no one spotted it.

That's how far we've come on security: We now have so many researchers digging so deep and looking so carefully that we're finding security holes we once would have called unfindable. We're no longer finding bugs just in newly released software. We're finding and fixing the flaws deep in the bedrock of our IT infrastructure. And that makes us much safer.

But ironically, the older and more tested and trusted a piece of software is, the more widely used it's likely to be. That means when these new deep searches for security holes turn something up, the potential impact is huge. Until that widely used software is widely patched, we're at risk — in a big way. Which is why, more than ever, none of us can afford any delays in finding the security holes in our systems — and closing them.

So make it a priority. Subscribe to a security service if you think you need it. If you don't, put someone on your staff in charge of scanning security sites and news groups for patches you need to install.

Then come up with a plan to implement those patches and fixes fast. And make sure the most critical of them can be implemented on an emergency basis.

Because finding deep, fundamental security holes like the one in sendmail really does make us safer. But the price of better security is greater risk — at least until we apply those patches. ▶

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

But It's Better Than the Fax

IT pilot fish is suddenly responsible for phone service, so she asks long-distance provider for a list of phone numbers currently getting service. And gets it – as a blurry 29-page fax. Could you please send it in electronic form? fish asks. "An hour later, I received an e-mail with the file attached," says fish. "It was a Word document with 29 pages of screenshots of the spreadsheet containing our phone numbers."

SHARK TANK

There's Two?

This user complains she can't log on – her Shift key isn't working. True enough, says pilot fish, the left-hand Shift key on her laptop is dead. Is your other Shift key broken too? fish asks. "Other Shift key?" says user blankly. "Oh!"

Could Be . . .

This intranet application ran fine for two months, but now it's crashing the server, so pilot fish opens an error ticket. Four days later, server admins return his ticket marked "Solved," adding, "We watched the error log for four days, and no further entries were written into it, so we assume the problem has disappeared." Sighs fish, "Is it possible that's because the application has not been running for four days?"

Why Not Oil It?

This printer has a paper jam, and it's squeaking too, user tells help desk pilot fish. "What I found when I got there wasn't what I expected," fish says. "A mouse had made the printer casing his home and was partially caught in the rollers. After carefully removing all doors and panels that might block the way, I shook the printer casing and set it on the floor – after which the mouse left the printer."

That Seems Clear Enough

Pilot fish sends self-loading update CDs to field staff every month. But this time, it's more complicated, so fish includes a note that says in big, bold letters at the top, "You *must* follow these instructions!" Says fish, "I've had about 20 calls that go like this: Have you got the instructions? Yes, I have them in my hands. Have you read them? Click. Dial tone. So far, none have rung back for further instructions."

Where Great Ideas Come From

Consultant pilot fish is on the phone with vendor's support tech, but having trouble – tech keeps throwing out the vendor's internal jargon instead of industry-standard terms. Maybe you could write a dictionary of your terms and customers could study it to make these tech support calls more meaningful, fish suggests sarcastically. "That's a great idea," tech chirps. "I'll talk to my boss about it!"

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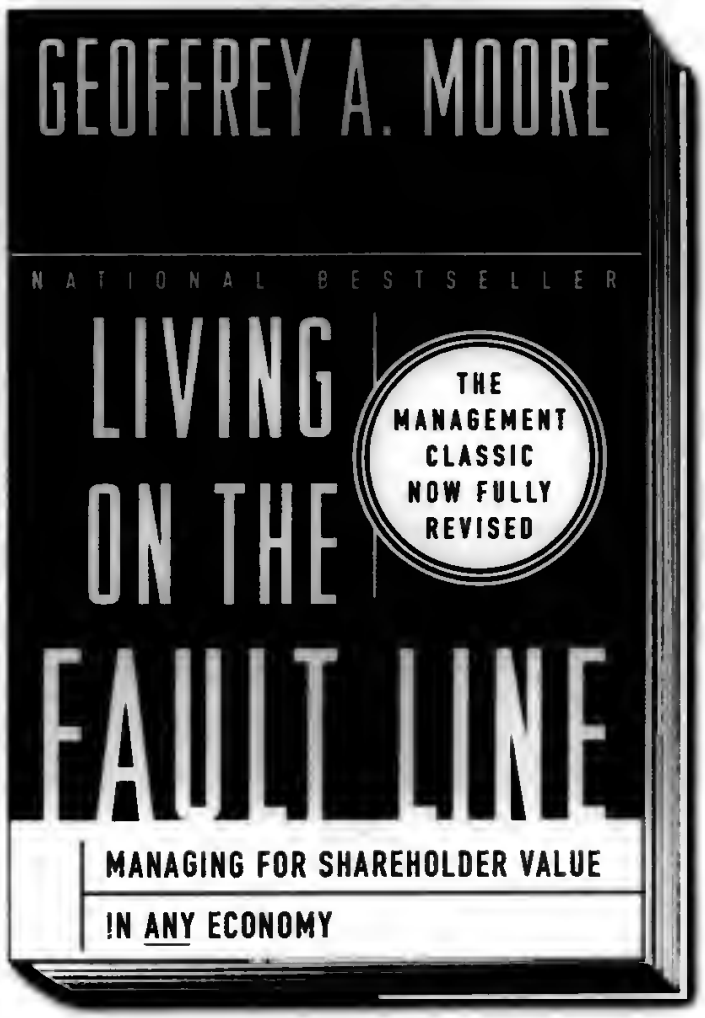
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